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The Art of Bird Photography II

an all - new continuation

Arthur Morris

The Art of Bird Photography II

by

Arthur Morris

An all-new continuation of the classic how-to work—

The Art of Bird Photography: The Complete Guide to Professional Field Techniques

The Art of
Bird Photography II

Visit www.birdsasart.com to learn more about BIRDS AS ART, to learn about our Instructional Photo-Tours and our International Photo-Safaris and Cruises, to learn about our "The Art of Nature Photography: It Ain't Just Birds" Weekend Seminars, to learn about our Photographic Site Guides, to sign up for free BIRDS AS ART on line Bulletins, or to access our Photographic Accessories mail-order pages.

All of the images in this book are available as signed photographic prints.

Arthur Morris

With more than 15,000 of his stunning photographs published in natural history books, magazines, and calendars all over the globe, Arthur Morris is widely recognized as the world's premier bird photographer. His images are noted for both their artistic design and their technical excellence. His fitting credit line: BIRDS AS ART. Mr. Morris is the author of four books. ***The Art of Bird Photography: The Complete Guide to Professional Field Techniques*** (Amphoto, NY), which quickly became the classic how-to work on the subject, was re-released in soft cover by Amphoto in 2003. Mr. Morris is a contributing photographer with VIREO (Visual Resources for Ornithology) at The Academy of Natural Sciences of Philadelphia and The Corbis Stock Market, New York, New York. More than 150 photo-illustrated articles by and about him have appeared in natural history, birding, and photographic magazines. He is a contributing editor of ***Nature Photographer***, a contributing photographer for ***Bird Watcher's Digest***, a ***WildBird*** advisory board member, and a ***Popular Photography*** columnist. Five of his images have been awarded prizes in the BG/BBC Wildlife Photographer of the Year Competitions.

As one of the original 55 Explorers of Light, he has been a Canon contract photographer for the past nine years, appearing in an EOS 1N television commercial and on seven episodes of the Canon Photo Safari. A gallery exhibit of his work, sponsored by Canon USA and The Nature Conservancy, began its run at the prestigious Roger Tory Peterson Institute in Jamestown, New York, in Summer 1999. In April 2001, 64 of his framed images were featured in a yearlong educational exhibit titled "On a Wing and a Prayer: The Migratory Birds of the Americas" at the National Zoo in Washington, D.C. Morris has conducted more than 350 slide programs and seminars in the past 15 years. He currently travels, photographs, teaches, and speaks his way across North America while leading more than a dozen BIRDS AS ART/Instructional Photo-Tours each year.

Cover: Common Loon, Soldotna, AK
Page i: Great Egret, Fort DeSoto Park, Tierra Verde, FL
Pages iii-iv: Black Skimmer, Fort DeSoto Park, FL
Page v: Brown Pelican, La Jolla, CA
Page vi: Roseate Spoonbill, Little Estero Lagoon, Fort Myers Beach, FL
Pages vii-viii: Brown Pelican, Fort DeSoto Park, FL
Page ix: Cattle Egret eating Chironomid midge, Indian Lake Estates, FL
Page x: Double-crested Cormorant, Venice Rookery, FL
Page xi: Gray-crowned Rosy Finch, Homer Spit, AK
Page xii: Bald Eagle, Homer Spit, AK

This book is dedicated to the memory of my Dad, Private First Class Robert Edward Morris. My Dad was a tough man and a tough father, but above all he was a good man.

• • • • •

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• • • • •

Important Note: Since I began photographing birds in 1983, I have used only Canon equipment. In 1995, I became one of the 55 original Explorers of Light, serving as a Canon spokesman and consultant. It has been a mutually beneficial relationship that continues to this day. I have included some specific information on Nikon lenses and digital camera bodies, but for the most part, I stuck with what I know best: Canon EOS cameras and EF lenses. For more detailed information on Nikon equipment, visit: www.moosepeterson.com.

It is a fact that many hundreds—perhaps thousands—of serious wildlife photographers have been influenced by the things that I have written and said about Canon equipment over the years. And many of those have in fact switched from Nikon or from other brands to Canon. Do know that I have never tried to sell anyone on Canon equipment. I have simply said, “Here are the images that I’ve made. These are the techniques that I have employed. And this is the equipment that I have used.” The rest as they say, is history.

It is important to realize that good photographers make good images with whatever equipment they have in their hands.

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Preface I
January 3, 2003

I sit in a plush first-class seat on American Airlines Flight 2855 bound for San Diego, California, the ticket paid for with credit card miles. The jet aircraft is cruising smoothly at 35,000 feet, yet I realize that since the publication of ***The Art of Bird Photography: A Complete Guide to Professional Field Techniques***, (hereinafter, the "first book") by Amphoto, NY, in 1998, my career has soared much higher than even this Boeing 757, and for that I am extremely grateful.

I am headed to the West Coast for yet another ten days of photographing LaJolla's incredible Brown Pelicans, their bill pouches bright red at this season each year with the flush of breeding plumage. Tomorrow, I will conduct a full-day seminar, "The Art of Bird Photography; It Ain't Just Birds." Do know that birds are, have been, and always will be my greatest love, my photographic passion. Recently, however, I began photographing a wider variety of natural history subjects—frogs, flowers, bugs, patterns in nature (especially those caused by moving water), fall color, mushrooms, and a wide variety of other tiny things. I have done this out of curiosity, but the result is that the full-day seminars attract more and more nature photographers who do not specialize in birds. (The seminar will be followed by two in-the-field workshops and then by a five-day BIRDS AS ART Instructional Photo-Tour. I shall be busy in San Diego…).

The idea for ***The Art of Bird Photography II*** (hereinafter, the "second book") has been in my head for well more than a year. The incredible advances in lens technology, the popularity of scanning film images for web use and sharing, and the exponentially increasing popularity of digital photography have practically forced publication of this new work. In addition, and perhaps more importantly, I have learned a tremendous amount about photographing birds in the past four years and have felt the great need to share what I have learned. I shall do so here.

Just an hour ago, I breezed through security at Orlando Airport, traveling for the first time on a photographic trip without a single roll of film. On my 2002 sojourn to Bosque Del Apache NWR, in New Mexico (my annual tribute to the memory of my late wife, Elaine), I began using the Canon EOS 1D digital camera body. I never had so much fun in my life. Digital photography allowed me to experiment creatively in ways that I would never have attempted when working with film.

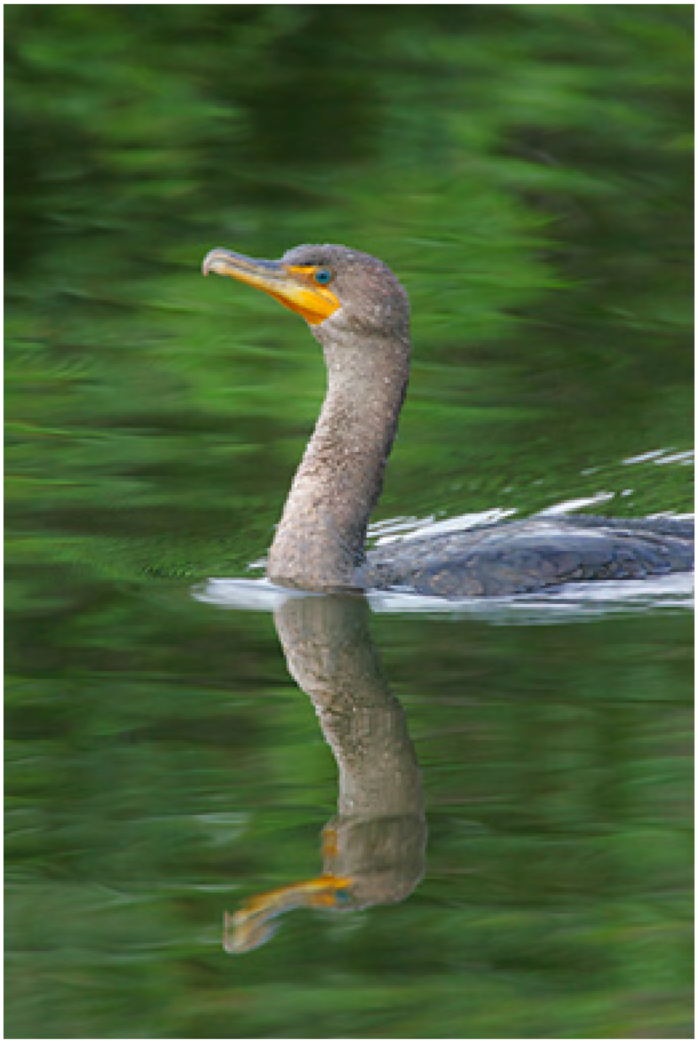
At this point I wasn't at all sure how we would store, label, access, or market my growing collection of digital images (many of which will undoubtedly appear in this book). But I have always photographed for the purpose of pleasing myself and having fun, and the sheer joy of digital photography with its instant gratification makes it unlikely that I shall ever be forced to return to film with my tail between my legs. With the help of friends, I will learn to implement a post image-production workflow that is both efficient and functional.

At this moment, my dream is to self-publish this volume, to do the layout and design on my own, and to market every single copy of the original press run of 10,000 by myself. I am confident that I can learn the skills needed to do the layout and design, but at this point feel that I will need to hire someone to oversee color management. My greatest desire is that the second book be every bit as beautiful and elegant as the first book

I do not plan on wholesaling ***The Art of Bird Photography II***. If these plans come to fruition, it means that you will have purchased your copy of this book from BIRDS AS ART, either at a public program, by mail order, or from our web site at www.birdsasart.com. It is the world-wide web that makes this dream possible, as our web-based mail order business (which had flourished beyond my wildest dreams) currently serves photographers from more than forty countries world wide.

This book will cover only new material, new ideas, and new techniques not covered in the first book, though surely there will be many topics in the first book that have been expanded upon here. The very greatest strength of the first book was the exposure chapter. Over the years I have received more positive feedback on this single chapter than on all the chapters in the rest of the book combined. I envision that the strengths of this book will be the chapter on advanced image design and composition (which will include many photographs with accompanying explanatory text), the chapter on new equipment, and the chapter on digital photography. (By the way, if you do not own a copy of the first book, you should stop reading right now and order a signed copy from us as the books are designed to be companion volumes, with the second building upon the first.)

When and if this book is ever ready for publication, I will write and include Preface II to let you know both about the self-publishing experience and what I have been up to photographically in the interim. As for the self-publishing dream, the only thing that I am sure of at this moment is that it will be a huge and exciting challenge.



Preface II March 11, 2005

Wow, I just read Preface I and I cannot believe that more than two years have gone by since I typed those words… In those 26 months, I have simply been having too much fun, traveling North America photographing birds and teaching others to do the same. As you have surely figured out by now, my plans have changed drastically. With the great success of several web publishing projects (the Digital Basics File and our Site Guide Series), I have—for several reasons—decided to publish ***The Art of Bird Photography II*** only as a CD. Going the CD route I will be able to include more information, and include more and larger images.

The words "digital storage" no longer instill fear in me, and I can optimize most images to near-perfection in minutes. With the immediacy of Digital Photography has come untold joy, renewed passion, and more than a few writing assignments directly related to my switching from film to digital. The acceptance of digital submissions by more and more publishers each month has been quite gratifying and many of my digital images have been published in a variety of magazines and calendars. Canon has led the league as far as technological advances in digital photography and my relationship with them has grown and flourished.

Career-wise, things could not be going much better. While image sales to books and magazines have been down noticeably since 9-11, our mail order business is beyond booming, and pretty much every BIRDS AS ART Instructional Photo-Tour sells out months in advance. As one of four keynote speakers, I presented the first-ever digital version of "A Bird Photographer's Story" at the NANPA Forum in Charlotte, North Carolina, this past January. The standing ovation that I received from the 600+ folks in attendance was one of the highlights of my life.

Since the publication of the first book, I have been back to Africa three times and have loved it more and more each trip. In the near future I shall get back to both Kenya and Tanzania again and visit the Galapagos Islands twice. I have been making several trips a year to Alaska to photograph birds and bears.

Visiting Nome—with its arctic nesting birds—has been a huge thrill, and in February of this year I made my first trip to the Homer Spit to photograph Bald Eagles and was totally blown away. In January of 2007, I will venture to South Georgia, the Falklands, and Antarctica.

While reviewing the first preface I realized that the "Practicalities" chapter will surely be recognized as one of the major strengths of the book. I was spurred to write this chapter when I realized that there are dozens of details concerning the practicalities of bird photography that have never been written about, the types of things that folks would pick up only on our Instructional Photo-Tours. There will be sections on traveling with, protecting, setting up, and handling your equipment and tips on photographing while on safari and on arctic tundra. Also included in Practicalities is a detailed section on how to set up your backyard (or feeding station or pond) for bird photography.

Exactly one week ago I loaded and installed my copy of Adobe InDesign and began trying to design and lay out the new book. The first week was extremely frustrating despite the fact that I had purchased (and studied) a tutorial CD and received some limited help from friends. But things are looking better after a week of trial and error, and I have hopes that the CD will be published before 2005 draws to a close…

Preface III January 12, 2006

It is 9:20 pm Eastern Time on Thursday, January 12, 2006. About five hours ago, I thought that the chances of having the book ready for distribution by the NANPA Forum in early February were one in ten thousand. I could not figure out how to put in the page numbers in InDesign and much of the pagination was messed up when I assembled the chapters into book form. But in the space of a few hours everything came together and now NANPA looks about 50-50... All that is left to be done now as I head off to bed after working straight through since 5:30 am is to finish writing this last Preface, create the PDFs, and get the whole thing onto a CD in a form that can be easily managed by you, the reader.

In the ten months that have passed since I wrote Preface II, I have worked very hard on this book off and on while traveling and teaching extensively with two big bursts of productivity in October and in December of 2005. Just before I left Milton Heiberg and older daughter Jennifer helped me design the CD face art. And I designed the CD gatefold packaging in a single day just before the start of the 2006 San Diego IPT.

I and the ten participants on that IPT had a special treat as John Shaw showed up as my surprise guest. John most graciously answered a thousand questions over the four days and did a few short but powerful slide programs for the group followed by some great Photoshop tips. Thanks again John for joining us.

The trends mentioned in Preface II have continued, with sales of images declining but with my seminars filling, our IPTs selling out, print sales flourishing, and the BAA mail order business booming. Friend, IPT-veteran, and Texas Tournament Hold-em (http://wilsonsoftware.com/bob-wilson-poker/) creator Rob Wilson urged me for years to begin accepting credit cards and we did just that in January 2005. In 2005 our mail order business alone grossed over $300,000. My policy of offering only those photographic accessories that I use every day at the lowest prices around has been the cornerstone of our mail order success.

Via our free on-line BIRDS AS ART Bulletins I let folks know which equipment is best and exactly how to use that equipment to help them make better images. The Bulletins include lots of nature photography-related information as well as info on our IPTs and seminars. Most Bulletins include eight to twelve new images with educational and informative captions. Readers of "The Art of Bird Photography II" should be aware that the captions that accompany the images in this book will prove extremely valuable to those who study them carefully. While many of the photo captions reinforce points made in the text, many of them introduce and explain new concepts that are not covered in the main body of the book.

The many galleries included here were designed to reinforce and expand upon the concepts covered in the main text, but on occasion, they too cover new ground.

At eight hundred two pages and with nearly seven hundred-fifty photographs, offering "The Art of Bird Photography II" as either a hard cover or soft cover book was simply not feasible. ABP II has been designed to be read on a computer monitor. The higher the quality of your monitor, the better the images will look. All of the images are of course low resolution images. Aside from printing a single copy of this book, any other uses of the images would constitute a violation of copyright law so please refrain from copying or printing the images except as noted above. I have worked long and hard on this book, so it would be appreciated if you would suggest that a friend purchase the book rather than offering them a pirated copy of the CD. Thanks for considering that.

My next big dream is to self-publish a coffee table book (yes, a real book) entitled "Birds As Art; The Bird Photography of Arthur Morris." The book, which will be in a square format, will feature 200 of my very favorite images. Before I get on to that, I plan on offering "A Pocket Guide to Histograms." This fold-able laminated brochure will be similar in format to our popular but long since sold out "Pocket Guide to Evaluative Metering."

2006 is shaping up as my biggest travel year ever, with two trips to Africa and three weeks in the Galapagos being the highlights. I am often asked if I dislike waking up in a motel room more than 200 days each year. The answer is "No." If I did not like traveling so much I would simply stay home.

Thanks for purchasing "The Art of Bird Photography II." I hope that each of you enjoys reading this book, and that your images get better and better over time as a result. Please feel free to let us know your thoughts about the book, and to offer suggestions, comments and criticisms as well via e-mail (birdsasart@att.net).

Lastly, I need to stop once again and count my blessings. I love what I do. I love teaching. I love meeting folks that love nature photography. I love travel. And I love the fact that I am able to make a wonderful living pursuing my passion, traveling the world and photographing birds.

Preface IV

Yet to come...

Foreword

Arthur Morris is without a doubt one of the premier bird photographers today. His pictures have appeared in countless publications and books. His photographic style is instantly recognizable: crisp subjects against a clean background. It's obvious to anyone who looks at his photos that he has a solid command of photographic technique as well as a thorough knowledge of avian behavior.

But there is another side of Art that is not so obvious to a person just looking at the pictures. Artie is not only a gifted photographer, willing to spend many hours in the field to get that special photo, but he is also a good teacher willing to share the very knowledge it has taken him so many hours to accumulate. This teaching ability manifests itself when he's shooting alongside other photographers. He can't help himself; he is always demonstrating the newest techniques he has discovered. It also comes out in his writing, from his shorter journal entries to his book-length works such as this.

I've photographed alongside Art and also watched him conduct photography programs and seminars. I've seen him offer field instruction and tips to both beginning photographers and accomplished pros. All in all, if you want to take better bird photographs – whether you shoot film or digital – my advice in simple: pay attention to what Art says. He knows what he's talking about.

John Shaw

Quote

"Arthur Morris's bird photographs have a truly unequalled elegance. As artist, he shares a rare gift of quiet intimacy in his work, then as teacher, powerfully describes the steps of this most delicate ballet with his shy and elusive, feathered partner."

Jim Brandenburg

Thanks!

...to my older daughter and BIRDS AS ART Executive Director Jennifer Morris for keeping BAA running smoothly and for Sammy and Maya, who add joy to my life every time that I see them. And to Alissa and husband Azik who recently provided me with my third grandchild, Ilyas Reimov.

...to James Litzenberg for his dedication and his friendship. Jim, my right-hand man, is responsible for all photographic submissions and returns, handles BAA mail and phone orders with friendly efficiency, and helps in every way possible. And to my son-in-law Erik Egensteiner (Jennifer's husband) who pitches in whenever help is needed.

...to Dave Metz and Steve Inglima at Canon Pro Markets/Explorers of Light. To Canon Pro Markets reps David Carlson, Michael Nadler, Barbara Ellison, Tom Bullington, and the rest of the gang. To Joe DeLora and Steve Losi at Canon Professional Services. And to Sal Matarazzo and John DiMauro at Canon Repairs in Jamesburg, New Jersey. And most of all to Canon USA for its continued and most generous support.

...to those who have either co-led BAA IPTs with me or helped out at shows: Ellen Anon, Todd Gustafson, Greg Downing, Rocky Sharwell, Robert O'Toole, Robert Amoruso, Glenn Wheeler, and Jim Nelson. To those who—when I knew nothing—helped me learn digital photography and Photoshop: Ellen Anon, Greg Downing, Tim Grey, Todd Gustafson, Gregory Georges, Matt Hagadorn, and the many ***students*** who passed along tips here and there to their old teacher. To old friends Richard Crossley, Julian Hough, Kevin Karlson, and David Sibley for their help with various avian ID problems. To Erik's folks Don and Ginny Egensteiner for their friendship and Sanibel shelter. And to Gus Zimmerman for his help with InDesign.

...to the many IPT repeat customers who have, over the years, become good friends: Rocky Sharwell, Alfred Forns, Isobel Wayrick, Stokes and Pat Fishburne, Wes and Patti Ardoin, Hal Dupont, John "Mind the thorns, boys!" Bryant of South Africa, L. F. and Marbry VanLandingham, Ivan Rothman, Victor Steel, Darrell Miller, Bill and Chris Keown, Jack Schillinger, Jim Urbach, Steve Metildi, Mike Elliot, Carl Kling, Forrest Roberts, Rob Wilson, Kym Chambers, and many others too numerous to list here.

..to the great folks at Wimberley Design: David and Clay Wimberley, Jill Conrad, and Cynthia Fenton. To Walt and Carol Anderson at Visual Echoes. To Alan Parry, Martin Wood, and Duke Doudna and the rest of the gang at Delkin Devices. To John R. Ford at JRF Manufacturing. To Chris and Sue Breeze at Breezebrowser. To John Zeiss, the Mongoose man. To Greg Downing, Heather Forcier, and E. J. Peiker for NatureScapes.net. And to Janie Bullard of Distinctive Journeys.

Special Thanks to Darrell Gulin for his love and NANPA support. To Alan and Sara Levine for their love and support over the years. To Ellen Anon for years of friendship and good advice. To Dr. Cliff Oliver for his medical and spiritual guidance, for his wisdom, and for helping me save myself from Oreo cookies. To Todd Gustafson for his friendship, help, and advice. And for the great memories of Kenya and Tanzania. (He uses Nikon equipment for the most part and I love him anyway…)

...to Linda Robbins for her years of love and friendship and shared days in the field. To Jennifer and Alissa for being the best daughters a father could want. To grandchildren Sam and Maya and Ilyas for always putting a smile on my face. To my loving sons-in-law, Erik and Azik. And to my Mom for having me and putting up with me for so long...

...to Milton Heiberg for his help in designing the CD face art. To Jennifer and Jim Litzenberg who read the entire final draft after it was skillfully edited by Mary Katherine Parks Workinger. Thanks Mary Kat for the great job that you did at virtually the last minute. And to Ed Kadane of Acme CD Replication for his help in getting this CD published.

...to each and every one of you who has attended an IPT, a seminar, or an In-The-Field Workshop. To all those who have written for help. To all those who have purchased books and photographic accessories from BIRDS AS ART.

And to all of those above and to the many whom I have surely but inadvertently omitted, please accept my heartfelt thanks for your friendship, your help, and your support. Without having each and every one of you in my life, the amazing success that I have come to know would be only a dream.

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Chapter I

Photography Equipment: What's New?

Snail Kite alighting with snail Lake Marian, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Meter reading off the blue sky +2/3 stop: 1/1600 sec. at f/5.6 in Manual Mode.

The EOS-1D Mark II was my workhorse body from the time of its introduction early in 2004 until late in 2005. At that time an EOS 20D was my lightweight backup. With their complex electronics, digital camera bodies fail more frequently than comparable film bodies so it is wise to travel with at least one backup body.

Since the publication of *The Art of Bird Photography* there have been countless improvements in both camera and lens technology. In the following sections I will, for the most part, be reviewing the equipment that I have owned and used for the past eight years. We will begin with the lenses.

Canon Super-telephoto Image Stabilizer Lenses

The four Canon super-telephoto image stabilizer lenses were all introduced in mid-1999. With each of them, photographers were able to make sharper images at slower shutter speeds than ever before. This was true even for those working with extremely long effective focal lengths, that is, with long lenses and teleconverters, and even, at times, with stacked teleconverters. These lenses feature a tripod-sensing IS system that eliminates the vibration caused by both equipment shake and by mirror slap. Despite contradictory statements in many editions of the lens instructions, the IS switch on these lenses should be set at the "On" position even when mounted on a tripod.

While IS will help photographers using sloppy sharpness techniques to make sharper images, those photographers employing excellent sharpness techniques will be able to push the envelope much further than their sloppy counterparts. (See advanced sharpness techniques in Chapter VI.) With all of these lenses it is best to set IS mode 2 for all applications. With most of the handheld intermediate telephoto IS lenses it is properly advised that photographers set IS mode 1 when photographing static subjects and IS Mode 2 when panning with moving subjects. It is not necessary to do this with the four super-telephotos because ***IS Mode 2 performs exactly the same as IS mode 1 when the lens is mounted on a tripod or resting on a beanbag.***

Though there are several excellent photographers who do great work with their 400 f/2.8 lenses (most notably Ron Austing), I have never been a fan of the 400/2.8s as workhorse bird-photography lenses. The lenses in this class are extremely close focusing and as such are ideal for use by those working at feeders, at nests, or with extremely tame birds. For me, however, these lenses simply do not offer enough focal length bang-for-the-buck. And the weight of the 400 2.8s is comparable to that of the 600 f/4 lenses, so choosing the former over the latter has never made bird-photography sense to me. I've said it before and I'll say it again: when choosing a workhorse lens for bird photography it is always best (with all other factors being equal) to choose a longer slower lens over a faster shorter one.

If I could only own a single super-telephoto lens, I have no doubt that today it would be the 500mm f/4L IS lens. The 500 is lighter, focuses closer, and is less expensive than the 600mm f/4L IS lens. The 500's lighter weight and size makes it much easier to travel with, easier to work with on the ground, and easier to work with in a vehicle. In a pinch, it can be handheld by most folks for a short while for flight or action photography. Some folks, led by the example set by Jim Neiger of Kissimmee, Florida, have had great success while routinely hand-holding this lens.

For more than fifteen years I made a living working with a guaranteed-sharp maximum effective focal length of 840mm: the 600 plus the 1.4X teleconverter. (Before the introduction of Image Stabilized lenses it was impossible to make consistently sharp images with long lenses and 2X teleconverters.) With the 500mm f/4L IS lens and the EOS-1D Mark II my guaranteed-sharp maximum effective focal length is 1300mm: 500mm X the 2X teleconverter = 1000mm X the 1.3 multiplier effect of the EOS-1D Mark II = 1300mm. For much of my bird photography I opt for the lighter 500 IS lens rather than the heavier 600mm.

I am fortunate to own both of those super-telephoto lenses. Between 2002 and 2004, I found myself using the 600mm less and less, in part because of injuries to my right shoulder that were caused by—of all things—carrying a big lens on a tripod on that very shoulder for nearly two decades. During this time period, I pretty much used the 600mm only when photographing from a vehicle or when working right outside of one.

(Health note: It is best to alternate shoulders when carrying a tripod-mounted super-telephoto lens in the field. When walking long distances, an even better practice is to remove the lens from the tripod. Carry the lens upside down by gripping the lens foot with one hand and carrying the tripod in the other hand. After hurting my shoulder in early 2004, Patti Ardoin suggested that I visit Aaron Mattes, a world-renowned exercise physiologist. Aaron's program of Isolated Active Stretching worked miracles and within weeks my shoulder was better than new. If any part of your body hurts, and you would like to feel better, you can learn more about Aaron's ground-breaking work here: http://www.stretchingusa.com/. In addition, be sure to get a copy of Pain Free by Pete Egoscue.)

After rehabbing my shoulder (actually both shoulders) in May, 2004, I began using the 600 IS more and more, especially when photographing at Fort DeSoto where the additional magnification of the bigger lens comes in handy when photographing small shorebirds. When traveling by air, however, the 500mm f/4L IS lens is always my choice. When teaching at Bosque (and several other locations) I always bring the 500 with me on the plane and ship the 600 and my backup 500 via FedEx Ground as I usually wind up renting a long lens or two on most IPTs. In addition, it is not a bad idea to have a backup big lens on location in case disaster should strike on a long trip.

Just before the image stabilized super-telephoto lenses were released, I made it known that I planned to be the first to trade the "old six," the 600mm f/4L, for the newer IS version. Folks—in light of the fact that tripod-sensing Image Stabilization technology was totally unproven—asked "Why are you committing to switching?" My answer: Because the IS version weighed two pounds less than the old 600 and focused two feet closer. As a full-time working professional, I would make the switch for those reasons alone. At the time it did not matter to me one bit whether IS would perform as advertised. As it turned out, however, I was amazed.

The first images with the 6 IS and the 2X teleconverter were head shots of a Herring Gull made at Stone Harbor Point, New Jersey, in early October of 1999. They were sharper than anything that I had ever done before with the 2X. A month later at Bosque, I made some sharp flight images of Sandhill Cranes landing with that same set-up. Flight photography with the 2X was the stuff of dreams. On my last morning, with a plane to catch, I was photographing a backlit roadrunner from the car and wanted to finish the roll of film that was in my camera. With only nine frames left, I slapped on the 2X and fired off nine frames at 1/45 of a second. I knew that at 1200mm—with the lens resting otherwise unsupported on the vehicle's door frame—there was no way in Hades that the images could be sharp. When I reviewed the images a week later I was stunned to discover that five of the nine images were professionally sharp, and that I could clearly see the reflection of my rental car, even the reflections of the driver's side tires, in the roadrunner's eye.

Sandhill Crane landing, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Meter reading off background grasses at zero: 1/800 sec. at f/9.

Flight photography with big lenses and a 2X teleconverter is difficult. It is very hard to keep the central sensor (the only available AF sensor with the 2X and an f/4 lens) on the bird's face or neck. (This image was, of course, cropped from the top.)

Osprey with fish, Gasparilla Sound, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/640 sec. at f/9.

When photographing from a boat, image-stabilized lenses are a huge advantage. This image was made as Marian Schneider's pontoon boat was moving past the bird at about 3 knots. As I had to make the image while photographing over the heads of clients and between the poles supporting the sun cover, I used 45-Point AFPS. Attempting to keep a single sensor on the subject would have been both silly and near-impossible.

The final and most convincing proof that IS had changed super-telephoto photography forever occurred the following February. Using the 600mm IS lens with ***two*** 2X teleconverters stacked around a 12mm extension tube, I made some very sharp head shots of a Great Egret that was more than 100 feet from my position. Studying the image on the lightbox I was amazed at how sharply the bird's black pupil was defined against its bright orange eye. I had created that image at an effective focal length in excess of 2400mm at a shutter speed of 1/100 sec. The naysayers could rail on and on, but their cries would not change the simple fact that image stabilization worked and worked exceedingly well. Today it is routine for me to use either the 500 or 600mm IS lenses with the 2X II teleconverter and produce razor-sharp images consistently at shutter speeds of 1/60 sec. and—at times—with shutter speeds even slower than that.

Series Two Teleconverters

In September 1999, Canon introduced two new series II teleconverters, the EF 1.4X II and the EF 2X II. Each of these featured improved weather seals to better protect against moisture and dust, but only the new 2X featured improved optics which, according to some folks, resulted in improved edge-to-edge sharpness. Teleconverters are such an integral part of my photography that I always travel with a spare 1.4X II and a spare 2X II. I have, on rare occasion, had problems with the locking pin sticking. Having a spare along can be a lifesaver: if the locking pin sticks without your realizing it, the camera may un-mount from the lens and hit the ground. And even if you catch it, you are unlikely to remember to snap it into place each and every time that you change TCs, and it only takes forgetting once to trigger a catastrophe. Combine the occasional problem with the locking pins and my habit of dropping teleconverters into both fresh- and saltwater and it is easy to see why I travel with two sets of TCs…

Ostrich calling, Tanzania

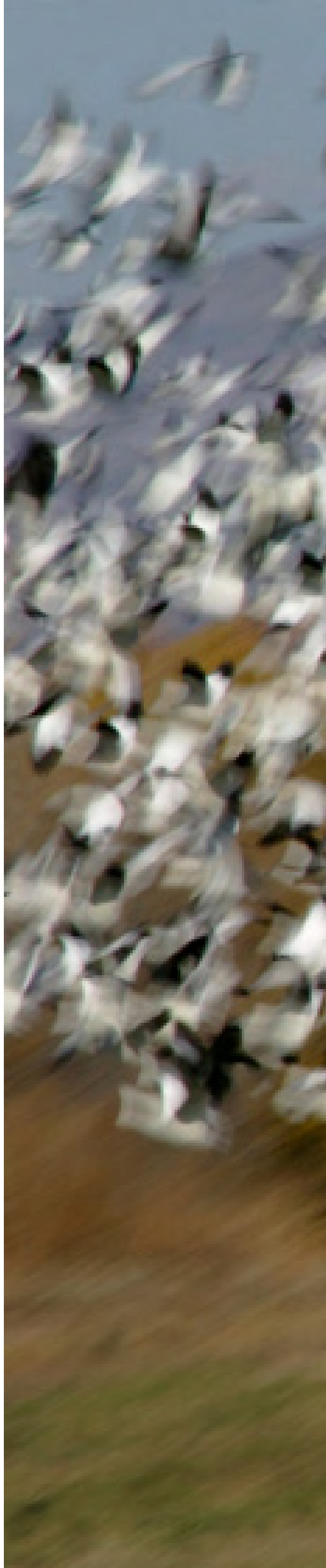
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/2500 sec. at f/5.6.

The 1.4X II teleconverter is my most important accessory. When used with f/4 lenses and pro bodies, all 45 AF sensors are available. Making this image was easy with 45-Point AFPS. There would be no way of placing the bird this far forward in the frame if you were using or limited to the central sensor.

Canon 100-400mm f/4.5-5.6 IS L Zoom Lens

This lens, introduced late in 1998, is famed, and rightly so, for its versatility. With a 1.3X digital camera, the focal length range is 130-520mm, and it is 160 to 640mm with a 1.6X multiplier effect digital camera. With its relatively close focus, it can be used effectively for photographing medium-sized or large flowers, frogs, toads, and large insects like dragonflies and butterflies. It is a superb safari lens: being able to zoom wide for nearby animals or to 400mm for distant subjects is a huge plus. It is, for similar reasons, a superb general wildlife lens. I have made lots of great images of moose, seals, and coastal brown bears with the 1-4. At Bosque Del Apache it was, up until 2005, my favorite blast-off lens, and by 2002 it had replaced the 500 IS as my bread-and-butter sunrise and sunset lens. I loved it on the cliffs of LaJolla where it allowed me to capture all manner of pelican behavior and I loved it on the beaches at Fort DeSoto where it was my favorite flock-blur lens. It was great for making scenic images on the Upper Peninsula of Michigan or for creating dramatic bird-scapes in Africa. And it was not a bad flight lens either, especially in situations where the birds might fly by very close to your position. Being able to zoom out when a pelican is landing right in your face or flying above you at point-blank range is a necessity. When working with a fixed focal length lens in such situations you are simply out of business. For years I was rarely seen on a beach or near a cornfield without having the 100-400 slung over my right shoulder…

With the advent of the digital age, replete with its 1.5 and 1.6X multiplier effect pro-sumer (high-end amateur) camera bodies, the 1-4 and the Nikon 80-400mm VR lenses were the choice of many new nature photographers: a handholdable 600 or 640mm or lens that could be zoomed wide enough to create a scenic image is quite impressive. As much as I loved my original 100-400, it almost always gave me problems, no doubt due in part to the rough treatment that I subjected all of my equipment to. The push-pull style zoom allowed dust, dirt, and moisture to get inside the lens, and the loose-tight collar that controlled the zoom-tension malfunctioned every so often. In addition, I had numerous problems with the IS unit: the lens would often lose electrical contact with the camera body. When working in Aperture Priority as I usually did, I would depress the shutter button and nothing would happen. I would see that the display read Av: 00. When this happened I had to un-mount and then re-mount the lens to rectify the problem. Needless to say, this could be quite disconcerting if you were trying to photograph dancing cranes or leaping impalas…. Soon thereafter the lens was off to Jamesburg, New Jersey, to have the IS unit replaced.



Snow Geese blast-off
Bosque Del Apache NWR
San Antonio, NM

Canon 100-400mm L IS zoom (handheld at 400mm) with EOS-1D Mark II. ISO 50. Evaluative Metering -1/3 stop: 1/25 sec. at f/32.

The 100-400 was my favorite blast-off lens for years. Being better able to frame the flock while ensuring clean upper and lower frame edges (as seen here) makes an intermediate telephoto zoom lens a far better choice than a fixed focal length intermediate telephoto lens.

When I eventually tired of having the lens repaired, I sold it cheap and purchased a new one. In short order I had more problems. I used it during my Bosque snow storm in November 2004 and made dozens of wonderful images, but the lens filled with snowflakes… I had it cleaned and dried. Right after I got it back, the lens began to autofocus slower than a slow snail crawls. I had it fixed, sold it cheap to another thrilled customer (who—you guessed it—also loves it), and decided to put the 70-200mm f/2.8L IS lens that I had purchased earlier in the year to the test. I do know of hundreds of folks who have used the 100-400 as their workhorse nature-photography lens for years without any problems. If you depend on the 100-400 as your primary wildlife lens and use it with the 1.4X teleconverter, I highly recommend that you work with the lens (which comes with a rotating tripod collar) on a 1325 tripod topped off with a Mongoose M-262. I do not recommend using the 100-400 with a 2X teleconverter. In informal surveys done on my IPTs and at seminars, about half of the folks who own a 100-400mm lens have had some sort of problem with the lens that required a trip to an authorized Canon factory service center. Though I have replaced the 100-400 with the 70-200mm f/2.8L IS lens as my auxiliary intermediate telephoto lens of choice, there are times when I dearly miss the longer focal lengths available with 1-4 zoom. I often borrow one when traveling to Bosque or to Africa. I find the 100-400mm zoom lens to be extraordinarily useful at these and similar locations.

Canon 28-135mm f/3.5-5.6 IS Lens

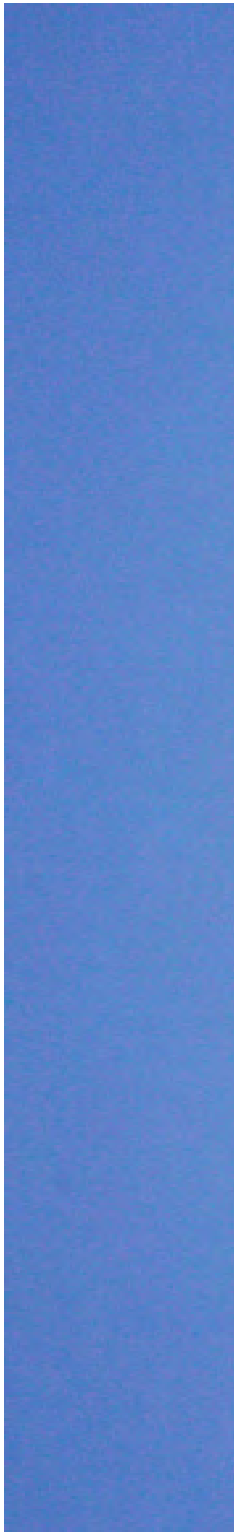
This lens replaced the 28-105mm as my wide-angle zoom “grab-shot” lens. On the rare occasions that I venture afield without remembering to put this lens in a vest pocket, I usually come to regret it quickly. I use this lens to photograph birders, photographers, and, of course, flocks of birds in their surroundings; to create purely scenic images; to photograph all manner of medium-sized to large natural history subjects; and at times, to photograph patterns. Though this lens shows some barrel distortion and (as it is not an “L” lens) some folks complain about sharpness at the widest apertures, for my purposes it has been a great lens and I have sold many images that I have made with it. And though you do not hear or feel the IS as you do with the larger lenses, the image stabilization works very well. I have made sharp, saleable images at shutter speeds as slow as 1/6 second and others report hand-holding and getting sharp results at speeds as slow as ½ second. I will be replacing this lens soon with the (relatively) new 24-105mm f/4L IS zoom lens, which promises sharper images and sturdier construction than its predecessor. As I now carry the 70-200mm f/2.8L IS lens pretty regularly, I will appreciate the extra versatility at the wider focal lengths while not missing anything at the longer end of the focal length range.

Sandhill Cranes
flash-flight
Bosque Del Apache NWR
San Antonio, NM

Canon 100-400mm L IS zoom (handheld at 400mm) with EOS-1D Mark II. ISO 800. Evaluative Metering +1 2/3 stops set manually: 1/160 sec. at f/5.6. Flash-as-main-light at zero with Better Beamer and Wimberley F-1 (Arca-Swiss) flash bracket.

I borrowed two 100-400 zooms for Bosque 2005, one for me and one for folks to try out. Both performed flawlessly. I love using this lens to make flash-flight images of cranes as they come into Harry’s Crane Pool at dusk. At times the birds come in very low and it is important to be able to zoom out when that happens.

Many folks do not like the extra wing that I included in this composition. For me, it adds a sense of place and a sense of mystery. The underside of the intruding wing is darker than the undersides of the main subject because of light fall-off from the flash.



Shorebird flock with Laughing Gull and American Oystercatchers, Fort DeSoto Park, Tierra Verde Key, FL

Canon 28-135mm IS zoom lens (handheld at 50mm) with Canon EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/15 sec. at f/29.

With the picnic table and a few folks in the background, an image like this could help sell an article on Fort DeSoto. The IS feature of the 28-135 allows you to make sharp images at very slow shutter speeds. In situations like this, you can use central sensor One-Shot AF; focus on a bird in the front row, keep the shutter-button depressed halfway, recompose, and make the photograph.

Canon 400mm f/4 DO IS Lens

Canon introduced this lens, their first diffractive optical (DO) elements lens, in late 2001. The new lens technology allows for lenses that are shorter and lighter with less chromatic aberration (color distortion) than standard lenses. My understanding is that some of the lens elements are constructed of calcium fluorite rather than glass. Canon used multi-layer diffractive elements and shortened the lens barrel to greatly reduce weight. The street price of this lens was well in excess of $6,000 when it was released. Despite the lack of demand the price of this lens has dropped only about $1,000 (while the prices of the rest of the lenses in the Canon super-telephoto lineup have dropped much more).

The 400 DO is physically smaller and, at 3.9 pounds without the tripod collar, much lighter than the 300 f/2.8 IS. Tests and reviews indicate that the sharpness of this lens at all apertures is outstanding. I have used this lens briefly (with film) on several occasions and was happy with the results even when used with the 2X II teleconverter. I know several photographers who own and use this lens regularly and each of them often hand-holds the lens for a variety of purposes but most especially for flight photography.

With digital taking over the world of bird and nature photography, the 400 DO is an attractive choice, especially for folks who want to get into the long lens ballpark while reducing size and weight. I ran into a guy at a Boston seminar who told me that he wanted a lightweight telephoto lens because he had recently undergone several hernia operations. I suggested that the 400 DO would be perfect for him. Years later he is still sending me thank you e-mails regularly. When used with either teleconverter I do recommend the use of a tripod. The regular Wimberley head is overkill for this lens for a variety of reasons, and if the Wimberley swing arm is positioned on the left (as I prefer) the lens controls are blocked. I do unequivocally recommend the use of the Mongoose M-262 with this lens and with any of the smaller lenses in this class (including all of the intermediate telephoto lenses).

Sandhill Crane, Indian Lake Estates, FL

Canon 400mm f/4 IS DO lens (tripod-mounted) with 2X TC and EOS-1v. Fuji Provia 100 pushed one stop to EI 200. Evaluative Metering -1/3 stop: 1/640 sec. at f/8.

Note the sharpness achieved at the wide-open aperture with the 2X TC. Note also the difficulty of maintaining the detail in the whites with scanned film.

Canon 300mm f/4L IS Lens

This, Canon's first professional L series image stabilized telephoto lens, was introduced in March 1997, and I purchased one soon thereafter. It is an excellent flight lens especially in low light or when the birds are flying by at close range. And it was the first to offer two IS modes, IS 1 for static subjects, and IS 2 for horizontal or vertical panning. The latter setting not only made for sharper images of birds in flight and in action, but it also improved the look and quality of intentional blurs. Be sure to set the limit range switch to the far setting (3m to infinity) when photographing birds in flight or in action; this reduces the time needed for initial focusing acquisition.

Another big plus for this lens is its extremely short minimum focusing distance of 4.9 feet (1.5 meters). Its close-focusing abilities make it ideal for photographing a variety of small subjects like frogs, turtles, snakes, lizards, flowers, dragonflies and other large insects. As this is an f/4 lens, it will autofocus with the 1.4X TC with all Canon bodies. This is another lens that is made much more attractive for bird and wildlife photography when coupled with a digital camera with a 1.6X multiplier effect.

Brown Pelican diving, Bolsa Chica Lagoon, Huntington Beach, CA

Canon 300mm f/4L IS lens with EOS-1Ds. ISO 250. Eval. Meter. +1/3 stop: 1/4000 sec. at f/4.

Though the 300 f/4 IS is an excellent flight lens, I still—in good light—like the old 400 f/5.6L for most handheld flight photography where its greater minimum focusing distance is a plus.

Purple Gallinule, pan blur, Anhinga Trail, Everglades National Park, FL

Canon 300mm f/4L IS lens (handheld) with EOS-1v. Fuji Velvia pushed one stop to EI 100. Evaluative Metering at zero: 1/15 sec. at f/13.

I envisioned this image after seeing a photo of a brightly dressed jogger made with the 300 IS using IS Mode 2.

Canon 70-200mm f/2.8L IS Lens

Once I began using this lens regularly in 2005, it was a case of "Where have you been all my life, honey?" I originally purchased this lens in late 2004 primarily to use on my first trip to Homer, Alaska, in February 2005, to photograph Bald Eagles. In Homer, where the eagles responded eagerly to our tossed frozen herring, the lens was invaluable. Its f/2.8 aperture was a plus in the often low-light conditions and, in addition, allowed for lightning-fast initial autofocus acquisition and accurate focusing. I used the lens for flight photography with one of my EOS-1D Mark II camera bodies and the combination performed superbly.

When I got back to Florida, I began carrying a Mark II 1D-mounted 70-200 on my shoulder by means of the camera-body strap. The 70-200 replaced the 100-400mm L IS zoom lens as my auxiliary handholdable telephoto lens. More often than not there was a 1.4X II TC between the lens and the camera as the 98-280mm focal-length range (effective 127.4mm-364mm with the 1.3X multiplier effect of the 1D Mark II) was generally more useful for bird photography than the 70-200mm range (effective 91-260mm with the 1.3 multiplier effect of the 1D Mark II). Do note that the 100-400 yielded an effective focal length range of from 130 to 520mm when used with the Mark II 1D.

The 70-200 with the 1.4X TC is still a stop faster than the 100-400 at the long end. The 70-200 features a twist-zoom instead of the push-pull zoom of the 100-400 and after a year of hard use has proved to be both durable and dependable. When I need to go wider to create a bird-scape or other scenic image I simply remove the 1.4 teleconverter and stow it in my X-tra Hand vest. With the 1.4X TC in place, the lens has proved to be great for photographing birds in flight and birds in action. It is an extremely versatile lens that I have used for dozens of different applications, from making zoom blurs of stands of wildflowers to photographing a falcon-beheaded Sanderling well before sunrise.

In addition to the 70-200mm f/2.8L IS lens described above, Canon offers both a non-IS version that is reputed to be even sharper than the IS lens and a 70-200 f/4L zoom lens, a favorite of folks who like to travel light because of its small size and extremely light weight. The latter lens is so small that it looks like a Barbie doll lens. It is a favorite of skilled professional nature stock photographer Charlie Krebs of Seattle, Washington.

Bald Eagle beginning dive, Homer, AK

(See additional caption info on facing page.)

Predawn cloud-scape, Fort DeSoto Park, Tierra Verde Key, FL

Both images handheld with 70-200mm f/2.8L IS lens (left: at 195mm; above at 70mm) with EOS-1D Mark II. Both ISO 400. Left: Evaluative Metering off the blue sky set manually: 1/2000 sec. at f/5.6. Above: Evaluative Metering +1/3 stop: 1/320 sec. at f2.8.

These two images give you an idea of the amazing versatility of the 70-200 f/2.8 IS lens. The f/2.8 aperture is really handy in low light situations. Many of the pro digital camera bodies feature one or more cross-type AF sensors that function only when used with lenses 2.8 or faster. This results in faster, more accurate autofocus.

Sandhill Cranes, predawn zoom blur, Bosque Del Apache NWR, San Antonio, NM

Canon 28-300mm IS zoom lens (on tripod with Mongoose M-262) and Canon EOS-1D Mark IIN. ISO 800. Evaluative Metering -1/3 stop. (Exposure locked in One-Shot AF after focusing on the birds at 150mm): 1/5 sec. at f/18.

The 28-300 is incredibly versatile. I had a ton of fun with it on my 2005 Bosque trip. The Mongoose M-262 is perfect for this lens.

Canon 28-300mm f/3.5-5.6L IS Lens

I borrowed this lens from Canon Professional Services on my November 2005 Bosque trip and found it quite useful especially when photographing sunrise at the main impoundment. The greater than 10X zoom factor was really incredible. If there was some sunrise color and you wanted to work fairly tight at the long end, you were fine; and if the birds blasted off right at you, you could simply zoom back to 28mm, add lots of light to your exposure, and keep making great images. Physically this lens is similar to the 100-400, and unfortunately, it is also a push-pull (rather than a twist) zoom.

The smooth/tight tension adjustment ring on the borrowed lens was fine, but the lens stuck at the long end, making it difficult to create zoom blurs. When buying a push-pull zoom you need to be prepared to check out several individual lenses at the camera store or return mail order lenses until you are satisfied. Be sure to check and see that the lens zooms in and out smoothly at all focal lengths and that the zoom is truly smooth when the smooth/tight ring is set to smooth. There seemed to be some barrel distortion at the wide-angle end and the images made at the wide-open aperture showed some vignetting. But with the huge focal-length range this one deserves consideration as either a starter lens for nature photographers who enjoy doing landscapes or as a superb lens for travel photography for those who like to travel light.

Nikkor 500 & 600mm f/4D IF-ED AF-S II Lenses

As one would expect, Nikon's two prime super-telephoto lenses produce sharp images. Both feature the Nikon Silent Wave Motor for fast, quiet AF operation. With their die-cast magnesium construction these lenses, at 7.6 and 10.7 pounds respectively, weigh considerably less than their Canon counterparts. And while there have been thousands of great images made with these lenses, many if not most serious amateur and professional nature and wildlife photographers have switched to Canon for two primary reasons: Nikon's lack of vibration reduction technology and Canon's vastly superior line of digital camera bodies.

When I got into this racket, the Nikon 500mm f/4P IF ED manual focus lens was the world's most popular telephoto lens, and Nikon dominated the sports photography market. Today, the Canon EF 500mm f/L IS lens is the world's most popular telephoto lens and an overwhelming number of white Canon lenses can be seen in action at all sporting events worldwide. These statements are not anti-Nikon propaganda, but rather facts pertaining to the state of nature and sports photography in late 2005. As I have said and written repeatedly, I have nothing against Nikon equipment or Nikon users. Good photographers make good images, and great photographers make great images. Todd Gustafson, who co-leads many African Photo-Safaris with me, uses Nikon equipment predominantly. And dozens of top nature photographers do the same. I respect each and every one of them.

Nikkor 80-400mm f/4.5-5.6 VR Lens

This was the first Nikon lens to feature Vibration Reduction technology, which—like Canon's IS technology—enables competent photographers to create sharp images handheld at shutter speeds two to three stops slower than would normally be expected. With most Nikon digital camera bodies users and IPT participants have experienced frustration when attempting to use this lens for flight photography, often using the word "sluggish" in their description of the AF capabilities. Years ago, when I was between signed Canon contracts I did try this lens out for a few frames with a Nikon F-5 and, surprise of surprises, most of the frames of Snow Geese in flight were tack sharp… As you cannot pre-focus with this lens, I simply autofocused on the corn at the approximate distance the geese were flying so that the lens would be in the approximate AF range… IPT veteran Middleton Evans, a skilled photographer from Maryland, loves the 80-400 VR for its focal-length versatility.

Nikkor 200-400mm f/4 VR Lens

This lens has received rave reviews from all quarters. The images that I have seen made with this lens have been spectacular as far as image quality, sharpness, color, and contrast. As the lens weighs 7.2 pounds most folks are using it on a tripod. One of the neatest features of this lens is the incredible 6.5 feet minimum focusing distance. The lens is reported to be very sharp wide open and results with the Nikon teleconverters are also reported to show exceptional sharpness. Some users state that the lens will not AF with the 2X teleconverter while others state that AF does work with the 2X. The old manual-focus 200-400 Nikkor was a legendary lens and it seems that the new AF/VR version will soon replace it.

Off-brand Super-telephoto Lenses

On occasion, folks on IPTs rely on off-brand super-telephoto lenses as their primary lenses. I have never used any of these lenses but have spoken at length to the folks who do and have viewed their images as well. In general, the lenses alone, be they fixed focal length 500mm lenses or long zooms such as 150-500mm, make fairly sharp images. When coupled with teleconverters, however, the results leave a lot to be desired: some folks are simply unable to create a sharp image with even a 1.4X teleconverter.

To me, purchasing one of these lenses represents foolish economy. You save several thousand dollars right off the bat, but if you choose to either upgrade or get out of the hobby completely after a year or two, the lens will sell for only a small fraction of the original purchase price. If you had purchased a quality lens at the start and needed to sell it for whatever reason, you can generally get 90 percent or more of your original purchase price back if the lens is in reasonably good condition. Some folks sell a quality telephoto lens that they have used for a year or two and actually wind up making a small profit. The guy who purchased the “bargain” lens often winds up losing several thousand dollars by selling it used.

One off-brand lens that has caught my attention recently is the Sigma 300-800mm f/5.6 zoom lens. I have seen some really fine images made with this lens, and the focal-length range is incredibly attractive to those working from a blind or from a safari vehicle. With a street price of about $5,000, this lens would seem to be a quality piece of equipment and I was impressed with the feel and construction when I handled one on an IPT in 2005. This lens is available for both Canon and Nikon AF systems. I would love to see Canon introduce a long super-telephoto zoom lens at some time in the not-too-distant future.

After the New Canon Lens Galleries, we’ll take a look at the newer camera bodies.

Reticulated Giraffes
Samburu National Reserve, Kenya

Nikkor 80-400 VR zoom lens at 80mm.

Image Copyright 2005
Todd Gustafson

New Canon Lens

Galleries

(See the Nikon Equipment Gallery at the end of this chapter for examples of images created with various Nikon lenses.)

Canon 600mm f/4L IS Lens

Gallery

Semipalmated Plover, post-breeding adult in dream-like setting, Fort DeSoto Park, Tierra Verde Key, FL

Canon 600mm f/4L IS lens with 2X II TC and Canon EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/160 sec. at f/16.

Even at f/16 you will not bring up any unwanted background detail when the background is hundreds of yards or farther away.

Sandhill Crane in snow,
Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and Canon EOS-1D Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/1000 sec. at f/8.

The 600 IS/2X II TC combination is so sharp that it is usually not necessary to stop down to f/11.

Laughing Gull calling, front-end vertical
Fort DeSoto Park, Tierra Verde Key, FL

Canon 600mm f/4L IS lens with 2X II TC and Canon EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/11.

I love working off a ground pod with a long telephoto lens and a doubler.

left:
Brown Pelican preening
LaJolla, CA

Canon 600mm f/4L IS with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/2000 sec. at f/4.

When I am using the 600 lens, I use it with a teleconverter about 90 percent of the time. Here, I should have chosen a smaller aperture to sharpen the feathers in the lower right corner. When making photos of preening birds, always strive to make images in which the bird's head is roughly parallel to the imaging sensor.

facing page:
Brown Pelican face portrait
LaJolla, CA

Canon 600mm f/4L IS with 2X II TC and 25mm extension tube with EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/1600 sec. at f/11.

With lots of light, stopping down at least a stop when using the 2X II with a big lens is usually a good plan. The next time that I make one like this, it will be at f/16.

Barred Owl with crawfish, Lake Martin, LA

Canon 600mm f/4L IS lens with 1.4X II TC and Canon EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/200 sec. at f/5.6. Fill Flash with Better Beamer at -1 2/3 stops. AI Servo AF with 45-Point AFPS.

The 600 and a 1.4X TC is a great combination for photographing birds in action. And yes, I would rather not have clipped the near wing here.

American Wigeon, calling drake, Socorro, New Mexico

Canon 600mm f/4L IS lens with 1.4X II TC and Canon EOS-1Ds Mark II. ISO 400. Evaluative Metering -1 stop: 1/1250 sec. at f/8.

When using the Mark II 1Ds (with its full-frame sensor) with the 600mm and the 1.4X TC, the combination provides an effective focal length that I am very familiar with: 840mm.

American Wigeon, genetic morph drake flapping, Socorro, NM

Canon 600mm f/4L IS lens with Canon EOS-1D Mark IIN. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/4.

When using the 1D Mark IIN (and its 1.3X multiplier effect) with the 600mm lens alone, the resulting effective focal length is 780 mm.

Greater Roadrunner, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and Canon EOS-1D Mark IIN. ISO 400. Evaluative Metering at zero: 1/800 sec. at f/11.

Here I used a prototype BIRDS AS ART Big Lens beanbag making it easy to create sharp images from my vehicle at an effective focal length of 1560mm.

Snow Geese flying across face of sun, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with stacked 1.4 and 2X II TCs and Canon EOS-1D Mark II. ISO 50. 1/8000 sec. at f/64 in Manual Mode.

Even with the minimum ISO, the smallest aperture, and the fastest shutter speed, I needed to darken the image two stops during conversion. In addition, I used linear conversion to ensure maintaining as much detail as possible in the highlight areas.

Full moon, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with stacked 1.4 and 2X II TCs with Canon EOS-1D Mark II. ISO 50. 1/500 sec. at f/16 in Manual Mode.

Here I adjusted the aperture and shutter speed until I got a good histogram that did not reveal any flashing highlights.

Canon 500mm f/4L IS Lens

Gallery

Black-throated Sparrow, Roma, TX

Canon 500mm f/4L IS lens with 2X II TC and Canon EOS-1Ds. ISO 400. Eval. Metering at zero: 1/60 sec. at f/8. Fill Flash at -1 stop with BB.

I made only a single frame of this bird before it flew. IS helped to make a sharp image here at a marginal shutter speed.

left:
Brown Pelican
grown chick in nest
Egmont Key NWR, FL

Canon 500mm f/4L IS lens with 1.4 X II TC and Canon EOS-1D Mark II. ISO 125. Evaluative Metering +1/3 stop: 1/400 sec. at f/5.6.

The 500 f/4 with a 1.4X TC is a deadly combination as it allows for the use of 45-Point AFPS. 45-Point performs superbly whenever a subject presents itself on a plane roughly parallel to the imaging sensor or the film plane.

facing page:
American Oystercatcher,
in foam
Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with 1.4X II TC and Canon EOS-1D Mark II. ISO 250. Evaluative Metering + 1/3 stop: 1/2500 sec. at f/5.6.

The lighter weight of the 500 (as compared to the 600) made it easy for me to hustle up and down the beach as this guy foraged in the breaking surf.

Burrowing Owl, Cape Coral, FL

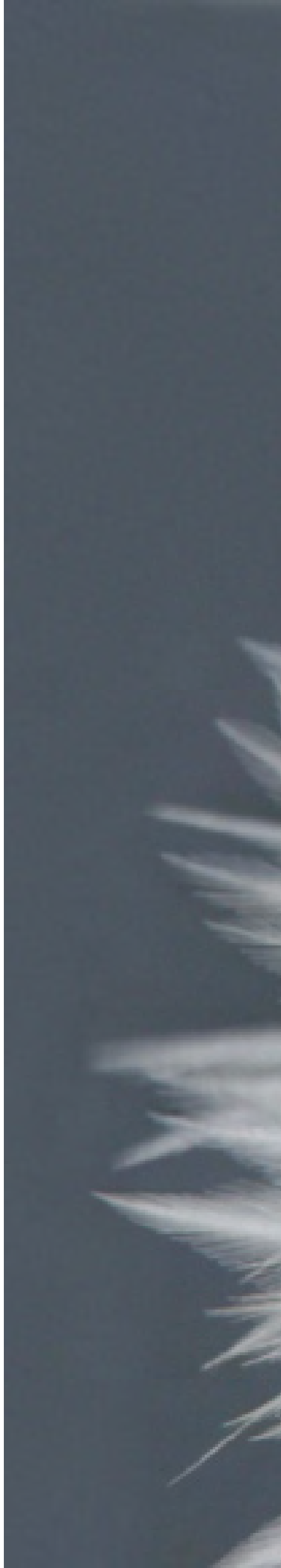
Canon 500mm f/4L IS lens with 50mm of extension and Canon EOS-1Ds. ISO 200. Evaluative Metering at zero: 1/160 sec. at f/5.6.

With tame subjects, extension tubes can be used to get closer than your minimum focusing distance of your lens. Doing so will of course increase the size of the subject in the frame. I always have a set of extension tubes in my vest when I am out in the field.

facing page:
Bald Eagle, adult
Homer, AK

Canon 500mm f/4L IS lens with 1.4X II TC and Canon EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/29 in Manual Mode.

When using a small aperture to make images like this, resist the urge to focus on the eye or eyes. Here I focused about 2/3rds of the way up the bill to take better advantage of the available depth of field.



Red-winged Blackbird, immature doing a split
Point Pelee National Park, Ontario, Canada

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/250 sec. at f/11 in Program mode. Fill Flash with Better Beamer at -1 stop.

With the 2X, I was limited to only the central sensor, but in this case, the resulting centered composition worked just fine. This one always gets a huge laugh during programs.

Snow Geese, predawn blast-off, Bosque Del Apache NWR, San Antonio, NM

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 500. Evaluative Metering +1/3 stop: 1/8 sec. at f/4 in Manual Mode.

When the birds are a good distance off, long lenses can be effective for creating well-framed, pleasingly blurred images.

Snow Geese, predawn landing, Bosque Del Apache NWR, San Antonio, NM

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/4.

Here I used a long lens to zero in on the only place in the sky where I could make the sharp image that I wanted to create.

Brandt’s Cormorant, head portrait, LaJolla, CA

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/125 sec. at f/11.

With the 500 IS able to focus inside of 15 feet, it is a great tool to use when creating head portraits of tame birds.

left:
Brown Pelican
California race, breeding plumage
LaJolla, CA

Canon 500mm f/4L IS lens with Canon EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/2000 sec. at f/5.6.

With the pelicans in close proximity on the cliffs at LaJolla, the 500 IS's closer focusing makes it a wise choice over the 600 IS.

facing page:
Sandhill Crane
chick in flowers
Indian Lake Estates, FL

Canon 500mm f/4L IS lens with 2X II TC and Canon EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/8.

When photographing at ground level it is much easier to work with the 500 than with the 600 because of its smaller size and lighter weight.

Swallow-tailed Gull
Hood Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/200 sec. at f/8.

I used 45-Point AFPS (correctly) here but was so excited when the bird threw this great pose for just a second that I cut off its tail. What I needed to do was take a quick step back and then make the image. This would have given me enough room to fit the whole bird in the frame.

Surfbird in breeding plumage, Cordova, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/250 sec. at f/5.6.

When I tell you that this image was made from a really rocking boat, I am not exaggerating. The rough seas made it nearly impossible to keep the bird in the frame, much less make a sharp image. I created about 35 images and this was the only sharp one. Without IS, I would have been sunk.

Canon 300mm

f/4L IS Lens

Gallery

Cattle Egret, flash flight, St. Augustine Alligator Farm, St. Augustine, FL

Canon 300mm f/4L IS lens handheld with EOS-1Ds. ISO 160. Evaluative Metering at zero: 1/500 sec. at f/13 set manually. Hi-speed synch flash at -1 stop with Wimberley F-1 (Arca-Swiss) flash bracket and Better Beamer.

The 300 f/4 is ideal for flash flight because of its small size and—at 2.6 pounds—because of its relatively light weight.

Lesser Flamingoes in fierce thunderstorm, Lake Borgoria, Kenya

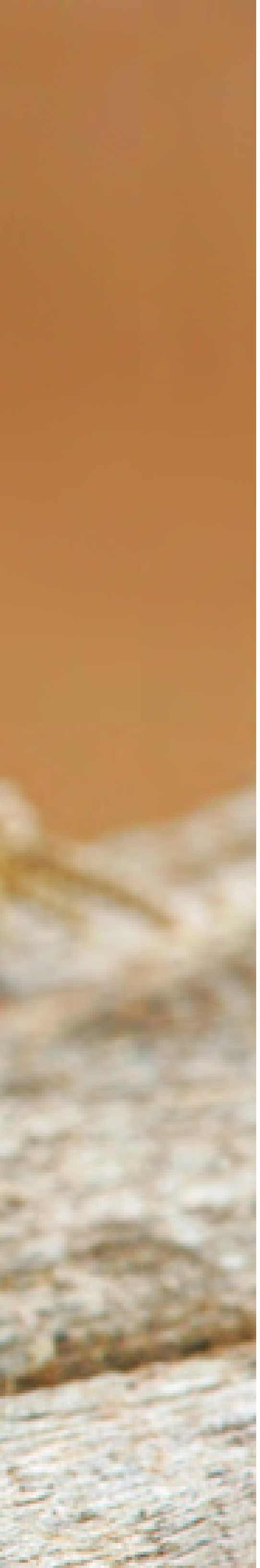
Canon 300mm f/4L IS lens with EOS-1v. Fuji Provia F 100 pushed one stop to EI 100. Evaluative Metering +1 stop: 1/15 sec. at f/8.

While everyone else was hiding in the van from the torrential rain, I exposed several rolls of film while drying the equipment with my underwear...

Laughing Gull with arced wings, Fort DeSoto Park, Tierra Verde Key, FL

Canon 300mm f/4L IS lens handheld with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/2000 sec. at f/8.

When working with birds at a fixed distance, as here while we were feeding the gulls, the 300 IS can be deadly.



left:
Texas Horned Lizard
Cozad Ranch, Linn, TX

Canon 300mm f/4L IS lens with 25mm Extension Tube and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/125 sec. at f/11. Fill Flash at -1 stop with Better Beamer.

The 300 IS with an extension tube is an effective tool for photographing little critters. Linda Robbins caught and posed this guy. We learned later that they are typically quite skittish and rarely sit still...

right:
African Lion(s) in tree
Lake Manyara National Park
Tanzania

Canon 300mm f/4L IS lens (handheld) with EOS-1D. ISO 400. Evaluative Metering +1/3 stop: 1/100 sec. at f/5.6.

When working handheld at 300mm with a shutter speed of 1/100 sec. image stabilization is pretty much a necessity if you wish to make sharp images on a consistent basis. Not only were these lions close, but when we finished with them our driver told us to look up. There were two more lions almost directly above us about ten feet up...

Canon 100-400mm IS L Zoom Lens

Gallery

Northern Shoveler hen taking off, Nome, AK

Canon 100-400mm L IS zoom lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/3200 sec. at f/5.6.

The 100-400 is a great lens to have on the passenger seat of your vehicle when you are tooling around in natural areas. Here, it was 45-Point AFPS that saved the day again. I subtracted 1/3 stop of light in case I caught the bird with her wings up. (The wing linings are white.)

Snow Geese, blast-off zoom blur, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (handheld) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/15 sec. at f/10.

Here I used One-Shot AF to lock focus and exposure at 235mm and then pulled back quickly on the zoom during the exposure.

Sandhill Cranes and Bald Eagles at dawn, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (on tripod at 190mm) with EOS-1D. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/9 in Tv mode.

The 1-4 on a tripod is a great tool for creating bird-scapes in situations where you need to fine-tune the composition and work at slow shutter speeds. After this lovely scene had unfolded and then faded, about twenty of us compared our images. Most folks had stuff totally different from the image above, but Greg Downing showed me his favorite: you could have laid his atop mine and had barely a pixel out of line. Is it possible to teach creative vision?

Snow Geese flock and setting full moon, Bosque Del Apache NWR, San Antonio, NM

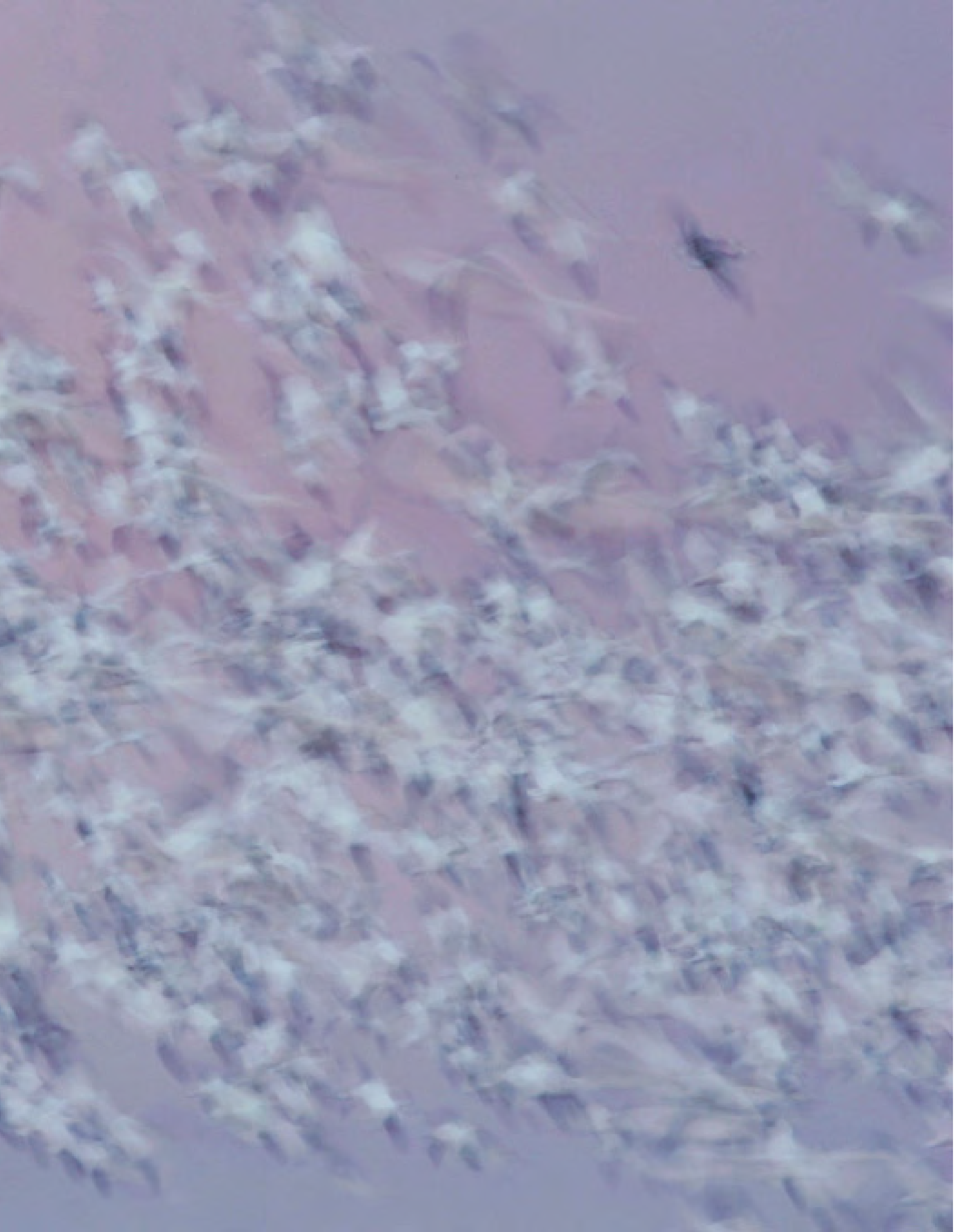
Canon 100-400mm L IS zoom lens (handheld at 105mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/5.6.

On two or three mornings each month you have a chance to include the setting full or near-full moon in images that feature the western sky.

Snow Geese flock at dawn, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (on tripod at 115mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/60 sec. at f/5.6.

On partly cloudy mornings the pink/purples/blues can be most intense to the south. On clear days those colors appear in the western sky.



Snow Geese flock in pink/purple sky
Bosque Del Apache NWR
San Antonio, NM

Canon 100-400mm L IS zoom lens (at 275mm) with EOS-1D Mark II. ISO 100. Evaluative Metering +2/3 stop: 1/4 sec. at f/20 in Tv mode.

To maintain total control of your chosen blur speed work in Tv mode.

Canada Geese in early morning light, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (at 320mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/5.6 set manually.

I will often--as I did here--tilt my tripod-mounted telephoto lens towards the sky, tighten the Wimberley head, and set my intermediate telephoto lens atop the base of the long lens so as to use the big rig as a support for the outfit that I had been hand-holding. This, of course, to help create sharper images.

Sandhill Cranes and Snow Geese in snowy cornfield, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (handheld at 115mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1 2/3 stops: 1/125 sec. at f/11.

Looking back on my earlier Bosque images, I now regret selling my 100-400. I will always have one at Bosque with me in the future.

Great Blue Heron landing, Gasparilla Bay, Placida, FL

Canon 100-400mm L IS zoom lens (handheld at 300mm) with EOS-1Ds. ISO 400. Evaluative Metering +1 stop: 1/1000 sec. at f/8.

When using the 1-4 for birds flying towards me, I try to estimate the ideal focal length and then zoom to that focal length immediately. This works much better for me than attempting to zoom wider as the bird gets closer.

Sandwich Terns and Black Skimmers, Fort DeSoto Park, Tierra Verde Key, FL

Canon 100-400mm L IS zoom lens (handheld at 250mm) with EOS-1D Mark II. ISO 125. Eval. Meter. + 1 1/3 stops: 1/20 sec. at f/16 set manually.

Notice again here the careful framing that you can achieve by practicing your zooming techniques.

Brown Pelican, Placida, FL

Canon 100-400mm L IS zoom lens (handheld at 230mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +2/3: 1/1600 sec. at f/8.

The background here was the reflection of a boat pulling into dock. I worked wide so as to include lots of background.

Yellow-crowned Night-Heron taking flight, Isla Del Sol, FL

Canon 100-400mm L IS zoom lens (handheld at 285mm) with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1000 sec. at f/8.

With either a fixed 300 or 400mm lens in my hands, I would not have been able to create this image.

Brown Pelican landing, LaJolla, CA

Canon 100-400mm L IS zoom lens (handheld at 130mm) with EOS-1D. ISO 250. Evaluative Metering at zero: 1/2500 sec. at f/5.6.

Here, I zoomed out to 130mm so as to frame this group of four. With a really strong wind from the north, birds were coming in all morning.

Brown Pelican landing, LaJolla, CA

Canon 100-400mm L IS zoom lens (handheld at 220mm) with EOS-1D. ISO 250. Evaluative Metering at zero: 1/3200 sec. at f/5.

With the birds landing at relatively close range, I had to rack the lens back considerably from 400mm to fit the whole bird into the frame.

Brown Pelican with head raised showing red bill pouch, Bolsa Chica Lagoon, Huntington Beach, CA

Canon 100-400mm L IS zoom lens (handheld at 320mm) with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/1600 sec. at f/5.6.

The pelicans in Florida never exhibit the bright red bill pouches that are characteristic of the West Coast birds in breeding plumage. Having an intermediate telephoto rig on your right shoulder whenever you are afield will pay great benefits over the years.

Brown Pelican landing, LaJolla, CA

Canon 100-400mm L IS zoom lens (handheld at 220mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/1000 sec. at f/5.6.

The 100-400 is a pretty good flight lens. As I did not like the background here, I selected the bird, feathered the selection one-half pixel, and used an 8 pixel Gaussian blur on the background giving the image a somewhat dreamy look.

African Elephants in Uaso Nyivo River, Samburu, Kenya

Canon 100-400mm L IS zoom lens (on beanbag at 190mm) with EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/400 sec. at f/11.

To create this image, I zoomed out to 190mm so as to include the curve of the river and the elephants in the background.

African Elephants in Uaso Nyivo River, Samburu, Kenya

Canon 100-400mm L IS zoom lens (on beanbag at 400mm) with EOS-1Ds. ISO 250. Evaluative Metering +2/3 stop: 1/250 sec. at f/11.

Here, working with the same group of animals, I zoomed in to 400mm so as to better show their details and interactions.

Canon 70-200mm IS L Zoom Lens

Gallery

Bald Eagle pre-strike, Homer, AK

Canon 70-200mm f/2.8L IS zoom lens (handheld at 200mm) with EOS-1D Mark II. ISO 250. Exposure determined by histogram evaluation: 1/2000 sec. at f/5.6 in Manual Mode.

I purchased the 70-200 specifically for my first Homer trip and did not regret it for a second.

Barred Owl in flight, Lake Martin, LA

Canon 70-200mm f/2.8L IS zoom lens (handheld at 135mm) with EOS-1D Mark II. ISO 400. Exposure set for bird in flight above: 1/1000 sec. at f/5.6. Flash at -1 stop.

The raw file was underexposed but salvageable. The 70-200 was perfect as this bird flew by at close range in response to a taped Barred Owl call.

Red-footed Booby at nest with chick, Tower Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS zoom lens (handheld at 95mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/4.

I found the 70-200 extremely useful in the Galapagos, both for its focal-length range and its speed.

River details and patterns (aerials) created near Cordova, AK

both: Canon 70-200mm f/2.8L IS zoom lens (handheld at 70mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop. Left: 1/640 sec. at f/8. Below: 1/500 sec. at f/8.

The 70-200 f/2.8L IS is a great lens to have on your lap during commercial, float, or bush plane trips. Using a flexible rubber lens hood eliminates reflections.

Photographer at North Beach, Fort DeSoto Park, Tierra Verde Key, FL

Canon 70-200mm f/2.8L IS zoom lens (handheld at 70mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/320 sec. at f/13.

The 70-200 is wide enough at the short end so that you can make some nice scenic images with it, even with a 1.3X camera body. Images like this that feature folks birding or photographing in attractive surroundings have excellent sales potential.

Mule Deer, curious doe, Bosque Del Apache NWR, NM

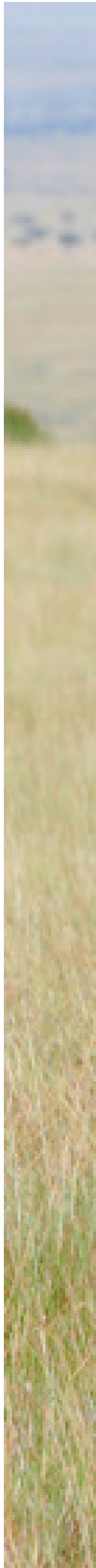
Canon 70-200mm f/2.8L IS zoom lens (handheld at 185mm) with EOS-1Ds Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/250 sec. at f/2.8.

I needed every bit of the wide open f/2.8 aperture and the 800 ISO setting to make a sharp image. With experience, you will find yourself dialing in an appropriate ISO almost without thinking about it.

African Elephant, threat posture, Maasai Mara, Kenya

Canon 70-200mm f/2.8L IS zoom lens (handheld at 165mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/8.

After several trips to Africa I realized that elephants--when they are close to the vehicle--will react aggressively when the van is in motion. Here I grabbed my fastest lens and made this image while the truck was moving. I used 45-Point AFPS to make focusing easier.



Shorebird researcher banding Western Sandpiper Cordova, AK

Canon 70-200mm f/2.8L IS zoom lens (handheld) with 1.4X II TC and EOS-1D Mark II. ISO 400. Both: Evaluative Metering. Left: at zero: 1/640 sec. at f/9; Below: at zero: 1/1000 sec. at f/9; Facing page: at zero: 1/200 sec. at f/11.

To create this series of images, I wanted to get in really tight to reveal the intimate details. The 70-200 with the 1.4 TC was the perfect tool for the job. The choice of an intermediate telephoto lens allowed the researcher to go about her chores without being disturbed.

Canon 28-135mm IS Zoom Lens

Gallery

High tide shorebird roost, Fort DeSoto Park, Tierra Verde Key, FL

Canon 28-135mm IS zoom lens (handheld at 33mm) with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/125 sec. at f/22.

The fluffy white clouds add greatly to the image as they balance the composition.

Mountain Range near Anchorage, AK (from commercial jet-liner)

Canon 28-135mm IS zoom lens (handheld at 53mm) with EOS-1Ds. ISO 250. Evaluative Metering +1/3: 1/125 sec. at f/16.

This image had lots of red and green in it from the reflections of the plastic window so I desaturated it 100 percent.

IPT participants on the cliffs at LaJolla, CA

Canon 28-135mm IS zoom lens (handheld at 50mm) with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/40 sec. at f/8.

With the short IS lenses you never feel the IS kick in as you do with longer lenses, but the results at slow shutter speeds are impressive.

Sandhill Cranes, red sunrise, Bosque Del Apache NWR, San Antonio, NM

Canon 28-135mm IS zoom lens (handheld at 100mm) with EOS-1D. ISO 200. Evaluative Metering at zero: 1/50 sec. at f/25.

Some lenses will show the starburst effect at apertures smaller than f/22 while others may not.

Short-billed Dowitchers taking flight, Fort DeSoto Park, Tierra Verde Key, FL

Canon 28-135mm IS zoom lens (handheld at 85mm) with EOS-1D Mark II. ISO 400. Eval. Metering +1 stop: 1/25 sec. at f/13 in Manual Mode.

There were lots of small groups of shorebirds flying around at close range and I was so busy wishing that I had brought the 70-200 that I did not realize until it was almost dark that the 28-135 IS that I had in my vest pocket would do just fine.

left:
Sandwich Tern, juvenile
Honeymoon Island
State Park, FL

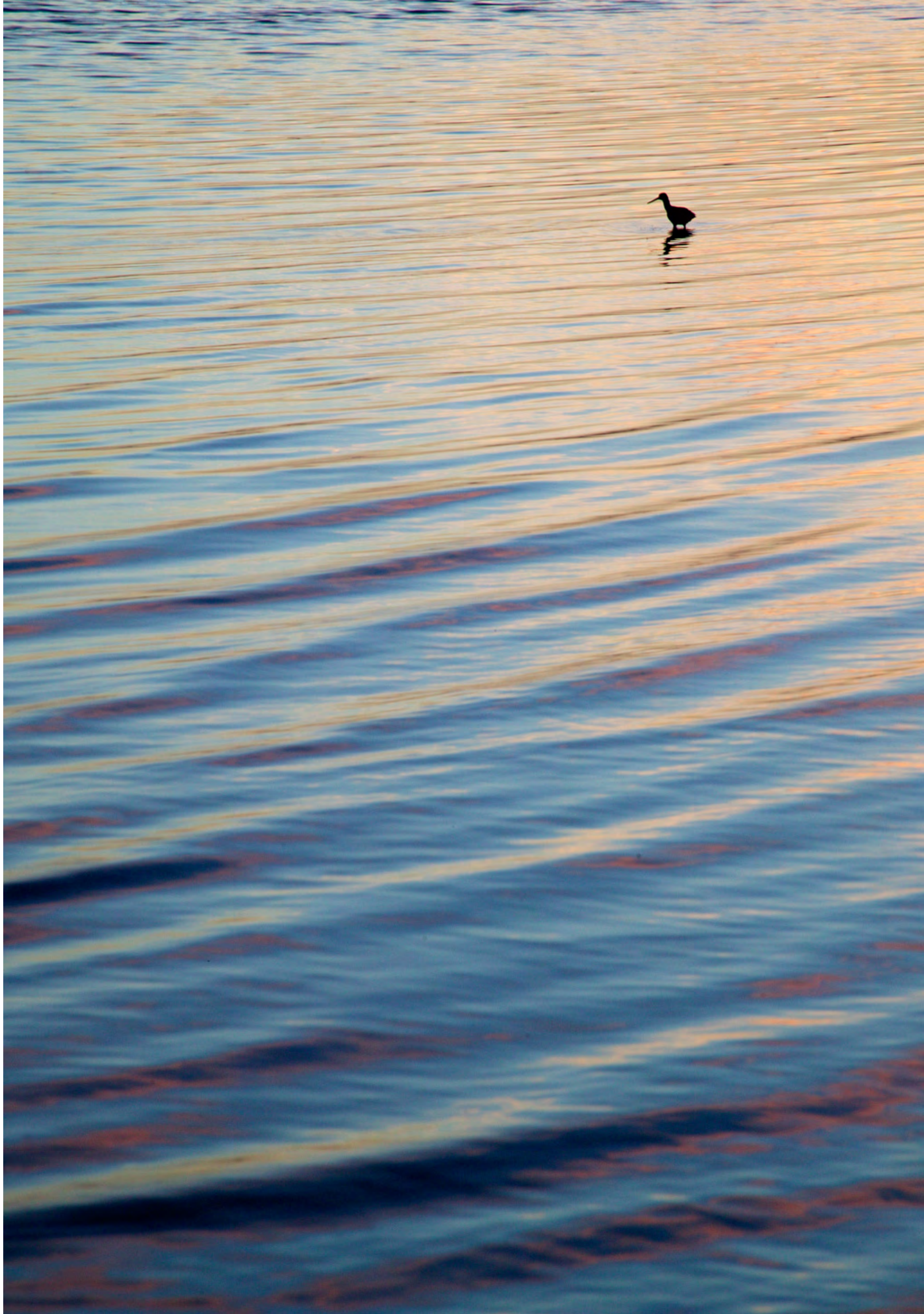
Canon 28-135mm IS lens (handheld at 135 mm) with EOS-1Ds. ISO 400. Evaluative Metering +1 2/3 stops: 1/800 sec. at f/5.6.

A fisherman dumped a huge bucket of live bait onto the rocks. The only tool that I had at the time was the 28-135 and it turned out to be just what the doctor ordered. Knowing that the Laughing Gulls would eat all the fish if I left, I opted not to go back to the car for something longer...

Willet at sunrise
Fort DeSoto Park
Tierra Verde Key, FL

Canon 28-135mm IS lens (handheld at 135 mm) with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/13 sec. at f/11.

One morning at DeSoto I arrived so early that I decided to challenge myself by taking a walk with only a short lens. I was happy with this image. Note the ridiculously slow shutter speed.



Bald Eagle chicks in promontory nest, Katmai National Park, AK

Canon 28-135mm IS zoom lens (handheld at 28mm) with EOS-1D Mark II. ISO 125. Evaluative Metering -1/3 stop: 1/60 sec. at f/18.

Though I made tight photographs of the baby eagles, this wide habitat image is by far the most dramatic. Note the gull carcasses near the nest.

Blue-footed Booby chick in habitat, N. Seymour Island, Galapagos, Ecuador

Canon 28-135mm IS zoom lens (handheld at 30mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/200 sec. at f/22.

This is not my typical style. At times I have to remind myself to make images that show habitat. Now, just remind me to make some verticals...

Canon EOS-1v

Canon's EOS-1v is their flagship film camera body and is the finest film camera they have ever produced. From the instant that you pick one up, you will be impressed with its feel, its heft, and its sturdy construction: the ergonomics are wonderful. And the first time that you close the camera back, or depress the shutter button, you will be reminded of the first time that you shut the door of a true luxury car. The 1v is a rugged yet finely manufactured precision instrument. And it is quieter and faster than its predecessor, the EOS 3.

With a continuous shooting speed of 10 fps in One-Shot while focusing manually, it is the fastest SLR in its class when using the Power Booster BP-E2 and the rechargeable battery packs. It is recommended that you use the BP-E2 and the rechargeable batteries; otherwise you have a Mercedes without the engine… (Note: The BP-E2 fits both the 1v and the EOS 3.) The quoted "9 fps in AI Servo AF" is achievable only in ideal shooting situations. Canon technical expert Chuck Westfall suggests 9 fps when photographing "a Formula 1 race car filling the frame, a baseball player stealing third base, or a group of thoroughbreds racing at the Kentucky Derby." He adds, "In all of these situations, lighting is likely to be good, subject contrast is likely to be easily readable, and subject movement in terms of direction and speed likely to be fairly consistent." For birds in flight on sunny days, the frame rate, about 6 fps, was plenty fast enough for me. The shutter buttons on all of my 1vs were responsive yet not trigger-happy sensitive. I never found myself ripping off five or six frames in a row unless I chose to put the pedal to the metal (which I did only rarely).

The 1v's Evaluative Metering system was similar to that of the EOS 3, while the autofocus system performed better: I had more success with birds flying towards the camera with the 1V than with the EOS 3, but tracking birds flying quickly towards the camera is still problematic with the 45 point AF system (even when using only the central AF sensor); lots of images are sharp on the eye, but with many AF seems to lag behind a bit so that the eye is soft and the legs are sharp. Using AFPS (all 45 points) for flight is a two-edged sword: acquiring and maintaining AF is child's play in most situations, but focus tracking is not as accurate as with central sensor alone. With advancing age (possibly) slowing my reflexes a bit, I find myself relying more and more on AFPS for flight and action photography. (Among the Canon film cameras it is my belief that the older A2 series bodies, the EOS-1n, and the Elan 7s will perform better with birds flying right at the camera than either the EOS-1v or the EOS 3.) Other 1v improvements from the EOS 3 include a 100 percent viewfinder with an adjustable diopter, a viewfinder shutter, 1/250 second flash sync speed, and a battery charge symbol on the LCD.

The EOS-1v offers 20 Custom Functions. I used the following: CF-3-1 (cancel DX coding), CF-8-1 (frame counter counts down), CF-9-1 (AEB not canceled when you change film), CF-10-3 (sets bright flashing of focusing sensor), CF-13-2 (Limits selectable focusing points to 11 and links spot metering to central sensor), CF-14-1 (cancels automatic flash reduction, i.e., programmed Fill Flash), CF-15-1 (sets second curtain flash sync), CF-16-1 (safety shift; in Av or Tv modes, shifts shutter speed or aperture to obtain a suitable exposure), and CF-18-1 (allows me to return to the central focusing sensor by pushing only the assist button).

While I normally set CF-13-2 to reduce the number of selectable focusing sensors from 45 to 11 (to make it easier and faster to move the focusing spots around), there are times when I toggle back to the default setting (CF-13-0) so that I can select any one of the 45 sensors manually. I do this when working with a bird that is pretty much staying in the same spot and in the same position so that I can select the sensor that falls directly on the bird's eye and maintain sharp focus. Having 45 selectable points may be a wonderfully attractive feature for many nature photographers.

The EOS-1v is an extremely durable camera. And with 72 different parts either gasketed or weatherproofed, and O-ring seals surrounding the lens mount and the back cover, the 1v is extremely weatherproof as well, but you still want to avoid using it in a downpour without an umbrella… With the EOS Link Software users can choose from 30 different Personal Functions and install the Exposure Data Management system that allows photographers to capture and download a broad range of data about each image.

The three personal functions that I used with my 1vs were invaluable when I was still using film. The addition of these three features was personally gratifying as each was a change that I had—in my role as a Canon Explorer of Light—suggested. PF-7 allowed continuous firing in AEB. PF-8 allowed for two-frame Auto Exposure Bracketing (AEB). (You no longer had to make three exposures when bracketing automatically, and you were able to toggle back and forth between two-frame and three-frame AEB.) PF-22 disables the shutter release when there is no film in the camera; call it idiot-proofing if you like…

Black Scoter yawning
Sunset Beach
Cape May, NJ

Canon 600mm f/4L IS lens with 2X TC and EOS-1v. Fuji Provia 100 pushed one stop to EI 200. Evaluative Metering +1/3 stop off the exposure locked with One-Shot AF on the eye: 1/640 sec. at f/8.

The EOS-1v was a great camera. I owned and used four of them over the years.

Important Notes for Digital Photographers

It goes almost without saying that new digital cameras come onto the market almost as fast as the seasons change. Today's latest-greatest body may be near-obsolescent in a year. My 11 megapixel Canon EOS-1Ds cost me in excess of $7,000 when I purchased it new about three years ago. I hope to sell it soon for about $2,200… Do understand that the camera is perfectly capable of making great images, but as compared to the newer models currently available, it has severe limitations. So what are the factors that one needs to consider when purchasing a digital camera body?

The pluses and minuses of the entire system include, but are not limited to: lenses, flashes, teleconverters, extension tubes (or the lack thereof), and other accessories, file size, as measured in megapixels, and the quality of those pixels. (These factors will determine the size of the largest sharp prints that you will be able to make from your digital files.) Frame rate. Buffer size (the larger the buffer the more images you can make in a long sequence without having to wait for the images to write to the card; when the buffer is full, you cannot make a new image). Autofocus performance. Ergonomics, including the feel of the body, the position of the controls and the ease of operation. Menu options and custom and personal functions. Flash synch speed. Image display. Software options. And dozens and dozens of additional features.

As a complete discussion of each of the factors above is clearly well beyond the scope of this book, those seeking complete technical information and specifications on virtually all digital camera bodies are directed to Phil Askey's amazingly comprehensive web site: http://www.dpreview.com/. After opening the home page, click on cameras, then select the brand that you wish to investigate, and finally click on the model. In his full reviews, Phil also covers body and design features, camera operations, controls, and displays, menu options, data processing times and file sizes, complete coverage of camera features, accompanying software options, photographic tests, comparisons with like-class camera bodies, review conclusions, and a sample image gallery. Such coverage is obviously beyond the scope of this book. http://www.dpreview.com/ is an incredible and invaluable research tool and readers are urged to utilize it.

Once you have purchased a camera, one of the best but often overlooked ways to learn to better use it, is to actually read and study the camera body manual…

Canon EOS D30 (May 2000) and D60 (February 2002) Digital Camera Bodies

Each of these pro-sumer (high-end amateur) level digital cameras has been discontinued, having been replaced by the Canon EOS 10D. The EOS D30 offered a 3.1 megapixel sensor, a 1.6X multiplier effect, and very slow autofocus. Street price was about $3,000. The D60 featured a 6.3 megapixel sensor, a 1.6 multiplier effect, and improved autofocus with a street price of about $2,000. Each autofocused only to f/5.6, so AF when using teleconverters was available only with faster lenses. (When the effective aperture was smaller than f/5.6—i.e., with a larger f/number—autofocus would not function.) While it was difficult to photograph birds in flight with the D30, the D60 was somewhat better. In the hands of a competent photographer adept at pre-focusing, AF performance with birds in flight was adequate. A used model of either of these camera bodies (but preferably a D60) would make a good starter body for a beginning digital bird photographer.

Canon EOS-1D

The 1D, the first all-Canon professional digital camera body, introduced in September 2001, was basically a digital version of the EOS-1v. The vertical grip of the 1D is built in. The 1D is a rugged, well-sealed camera that feels solid in the hand. The camera, of course, features an LCD screen on the back as well as several control buttons. Many of the controls on the top of the camera are identical to the controls on the 1V, but the custom functions and some other camera operations are controlled via the menu button. The 1D—at 8 fps—is fast, and with a 16-frame raw image buffer, firing off long sequences rarely presented a problem. The camera yields images of 4.15 megapixels, more than adequate for making 12x16 inch prints from sharp image files.

In my opinion, autofocus with the 1D was faster and slightly more accurate on average than AF with either the 1V or the next generation digital pro body, the 1Ds. I felt that was true for two reasons. Because the sensor on the 1D is smaller than a frame of 35mm film, the array of AF sensors covered a proportionately larger part of the focusing screen in the 1D than in the 1Ds, thus rendering the same sensors more effective. When firing off a burst of images in sequence, the subsequent images are often sharper than the first image because the Canon AF system in these two cameras is designed so that the camera *will* fire with the first image out of focus *but will not do so* when subsequent images are made. Firing off long bursts of images with a 1D when flying birds enter the ideal image-making zone usually results in several sharp images. With the 1Ds, frame advance is relatively slow so that only one or at most two images can be made on a single pass thus decreasing the percentage of sharp images.

Because the sensor on the 1D is somewhat smaller than a frame of 35mm film, this camera offers a 1.3X multiplier effect. Using the 1D with a 600mm lens and the 2X TC yielded an impressive effective focal length of 1560mm, 1300mm with the 500mm/2X TC combination. Since all Canon professional EOS camera bodies focus to f/8, these combinations will autofocus at 1560 and 1300mm as above, albeit with only the central sensor active. AF performance at f/8 is relatively sluggish, but accurate. By pre-focusing manually on flying birds, it is possible to produce sharp images in brightly lit situations when the birds are large and are flying a fairly steady course. Because of the 1.3X multiplier effect and its fast, accurate AF, the 1D is ideal for use with the handheld intermediate lenses like the 400 f/5.6L, the 300mm f/4L IS, and the incredibly versatile 100-400mm L IS zoom lens. The 1D is the only Canon digital camera that offers a flash synch speed of 1/500 second, making it ideal for flash-flight photography.

Out of production since April 2004, the 1D, if you can get your hands on one, is a superb option for photographers whose file size needs are not too demanding. Its low cost (relative to the cost of the other Canon professional digital bodies, the 1Ds and the Mark II bodies) is the primary attraction, but the 1D's superb image quality, its wide range of professional features, and its AF speed and accuracy combine to make this camera body an excellent choice for many hobbyists. If the 4.15 megapixels and sharp quality 12x16 inch prints work well for you, the EOS-1D may be the perfect camera for you. And with the 4.15MP files, storage concerns are not as dramatic as they are with the other Canon digital bodies.

Northern Harrier, hen, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D. Evaluative Metering +1/3 stop: 1/80 sec. at f/10.

I immediately fell in love with the 1.3X crop factor of the 1D.

African Lion snarling
Tanzania

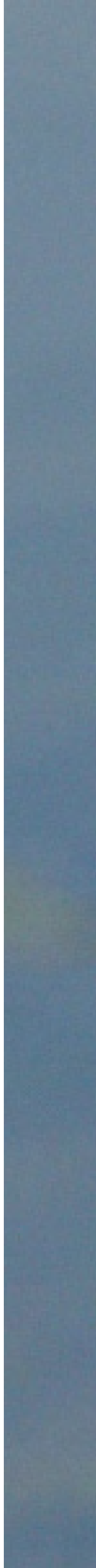
Canon 100-400mm L IS zoom lens (handheld at 365mm) with EOS-1D. ISO 250. Evaluative Metering +1/3 stop: 1/125 sec. at f/8.

With the 1.3X crop factor, the 1-4 zoom on a 1D offered an effective focal length range of from 130 to 520mm. No matter which camera it is coupled with, the 100-400 is a great lens to have on safari. I do hope that one day Canon will produce an f/4.0 twist-zoom version

Semipalmated Sandpiper
juvenile in flight
Jamaica Bay WR
Queens, NY

Canon 400mm f/5.6L lens with EOS-1D. ISO 400. Evaluative Metering -1/3 stop: 1/1600 sec. at f/8.

While leading an IPT to Jamaica Bay I half-jokingly suggested that we take a walk and attempt to do some flight photography of individual birds in flight. As I outlined the plan, I was thinking, 'This will never work...' I was wrong.



Canon EOS 10D

This 6.3 megapixel camera was introduced in February 2003. It is safe to say that the 10D and its successor the 20D (with their 1.6X multiplier effects) opened up new worlds for countless numbers of bird photographers. And while some deride the multiplier effect as voodoo or myth, the simple fact is that you are working with a given effective focal length (the focal length of the lens times the multiplier effect) and a given number of pixels: the multiplier effect is real.

So what's the big deal? When combined with any of Canon's intermediate telephoto lenses, nature photographers who previously could not afford big glass are now in the game. For example, the 10D and the 300mm f/4L lenses yield an effective focal length of 480 mm, and an effective focal length of 672mm with the 1.4X teleconverter (with all 7 AF points available). And this rig—even with the 1.4X TC-—is easily handholdable. With either the 400mm f/5.6L lens or the 100-400mm L IS lens, the 10D yields a maximum effective focal length of 640mm, or 896mm with the 1.4X TC. In the latter cases, the use of a tripod is pretty much mandatory as you will—when working with the 10D and f/5.6 lenses—need to focus manually.

The 7-point autofocus system may very well be Canon's most accurate for tracking birds in flight, especially those flying directly at you. When I used the 10D for flight photography, I often chose to activate all seven AF points and had some very good results. Though initial focus acquisition is not as fast as with the Canon professional digital bodies, the system performs quite well and is able to track birds in flight while maintaining accurate focus. In many cases, the 10D was able to maintain focus when the bird dropped below the horizon, not searching for the mountains, the trees, or the cornfields in the background. And more importantly, nearly every single flight image was razor sharp on the eye! I was most impressed.

I have also done well with the 10D when using the central sensor only for flight. The effective focal length of the 10D/500mm lens combination is 800mm. This gives flight photographers an added advantage: at a given image size, birds in flight are moving more slowly through the viewfinder of a 10D than through the viewfinder of cameras with lesser or no multiplier effect because their flight speed *relative to the photographer's position* is slower. It is, therefore, easier to pan and follow the birds in flight. And the same is true when using any of the previously mentioned handholdable telephoto lenses for flight photography.

When used with the 500mm or 600mm Canon lenses and the 1.4X II TC, the 10D (and its successor, the 20D) allows you to avoid using the 2X II TC. Do the math. With the 1Ds or 1Ds MII the 600mm lens, and the 2X II TC, the effective focal length is 1200mm. With the 10D and the 1.4X II TC, the effective focal length of the 600mm lens is 1344mm! And you will have an image with 6.29 million pixels and, at the same time, you will have all 7 AF points available (rather than the central sensor only that is available with the 2X and the 1Ds). For those with good eyesight who are able to manually focus the lenses with the 2X TCs accurately, the numbers are staggering with effective focal lengths of 1600mm for the 500mm and 1920mm for the 600mm! Thus, the 10D (and the 20D) make excellent backup camera bodies for those who own a pro body, and in addition, its light weight and accurate AF system make it ideal for use with the auxiliary flight lens that hangs from the shoulder of many of those toting long, tripod-mounted telephotos into the field.

The 10D has an LCD light that made working in the predawn darkness a snap, and it allows you to create images in the raw plus J-PEG Mode that I use and recommend. There are lots of other impressive technical specs that you can check out at www.dpreview.com, but to me, the proof is in the images... Do note that the images that come from the 10D are, on average, a bit warmer (too orangish to my eye) than images coming out of the 1D series bodies. I often do a Color Balance adjustment on my 10D images, generally adding about 4 points of cyan. With at street price of about $1400, this camera represented an incredible value when it was released, if you consider that the price of a new D30 was more than $3000!

The 10D has a really neat pop-up flash that can be useful for photographing birds at close range or, amazingly, when using high ISO settings. The meters on most of the 10D bodies that I have come

across have been about 1/3 stop lighter than the meters on the other Canon pro digital camera bodies. For those who know how to interpret a histogram this is not a problem at all, but it may cause some confusion when you are using two cameras that require different exposure compensations for the same scene in the same light.

Some may feel that the 10D alone feels like a toy camera, but the ergonomics are improved greatly with the addition of the vertical battery grip. Adding the BG-ED3 gives the camera the feel of a pro body and helps it balance much better with the big telephoto lenses. The double battery is a big plus in all weather, but is especially so when the temperatures begin to drop.

On the negative side are the low flash synch speed of 1/200 sec., the relatively slow 3 fps, and the really slow write-to-buffer speed that can be a pain if you fire off a burst of images (maximum of nine). Also bothersome is the fact that the highlight-alert feature is only viewable on the tiny image that appears alongside the histogram; it would be much better if it appeared on the full-sized image on the rear LCD screen. Do note that some of the early production 10Ds had serious focusing accuracy problems and needed to be sent to a Canon repair facility for a quick fix. When purchasing any new camera it is always a good idea to tape a sheet of newspaper to the wall, make a few images with a tripod-mounted telephoto lens with using both AI Servo and One-Shot, and to check the images for sharpness.

The biggest negative for me is that when compared to the professional series EOS camera bodies, initial autofocus acquisition with the 10D is woefully sluggish, especially when used with teleconverters. But all in all, the 10D is an excellent pro-sumer quality body, a great starter camera for beginning digital photographers, and a great back-up or auxiliary body for serious photographers.

Herring Gull, immature screaming
Jamaica Bay Wildlife Refuge, Queens, NY

Canon 300mm f/4L IS lens (handheld) with EOS 10 D. ISO 200. Evaluative Metering at zero: 1/1250 sec. at f/5.6.

By pre-focusing manually, it is perfectly possible to make sharp images of birds in flight and in action with the 10D.

Brown Pelican in flight, Bolsa Chica Lagoon, Huntington Beach, CA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS 10 D. ISO 400. Evaluative Metering -2/3 stop: 1/1000 sec. at f/11.

Here, the 10D focused accurately with the 600 and the 1.4X II TC.

Sandwich Tern with fish, Fort DeSoto Park, Tierra Verde Key, FL

Canon 400mm f/5.6L lens with EOS 10 D. ISO 200. Evaluative Metering -2/3 stop: 1/1000 sec. at f/10.

The 10D, coupled with the 400 f/5.6 (my beloved "toy" lens) yields an impressive handholdable effective focal length of 640mm.

Fischer's Lovebird, Ndutu Lodge, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS 10D. ISO 800. Evaluative Metering at zero: 1/80 sec. at f/5.6. Fill Flash with 550 EX flash and Better Beamer at -1 stop.

The extra magnification of the 10D was needed here as was image stabilization. You need to keep your eyes open at all times when photographing: I spotted several of these guys right above our parked safari van as we were unloading after a morning game drive. We had lots of fun with this typically hard-to-photograph species.

Snow Goose landing
Bosque Del Apache NWR, NM

Canon 500mm f/4L IS lens with EOS 10D. ISO 400. Evaluative Metering at zero: 1/3200 sec. at f/8 in Manual Mode.

With a 10D and its 1.6 multiplier effect on the 500 IS, the effective focal length of 800mm allows you to photograph birds at a great distance, birds that are effectively slowed by their relatively distant position.

Driver guides, Tanzania

Canon 28-135mm IS lens with EOS 10D. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/4 in Program mode with pop-up flash.

The pop-up flash on the 10D does just fine indoors. The better you treat your guides, the better your safari will be.

Grey-breasted Spurfowl
Ndutu, Serengeti, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS 10 D. ISO 400. Evaluative Metering -1/3 stop: 1/125 sec. at f/6.3 in Program mode with pop-up flash.

When my EOS-1Ds stopped working on the first day of my second Tanzania safari, the 10D saved the day as a reliable backup. As you can see here, the pop-up flash can be used as fill when working with birds at close range.

Brown Pelican head throw LaJolla, CA

Canon 500mm f/4L IS lens with EOS-1Ds. ISO 400. Evaluative Metering +1 stop: 1/2000 sec. at f/4.

When working at close range, a digital camera with a full-frame sensor can be a big advantage. The 11 megapixel files of the 1Ds allowed for the creation of large prints with incredible detail. Canon used one of my 1Ds images and made a six-foot-tall transparency that blew folks away at trade shows.

The Canon EOS-1Ds

Upon its introduction in 2002, the 1Ds was Canon's flagship professional digital camera body. Many felt that its high quality 11.2 megapixel files far surpassed 35mm film in terms of color rendition, contrast, and resolution. The sensor on this camera is the same size as a piece of 35mm film, thus there is no multiplier effect. A 16-35mm zoom lens will give you true 16-35mm coverage. Thus, the 1Ds was a favorite with landscape photographers.

I purchased a 1Ds early on and made some great images, but it had many drawbacks as a bird photography camera. The relatively slow frame rate (three frames per second) was a handicap in flight and action situations. The 1Ds had a small buffer (10 raw images) and the write-speed was horribly slow. It seemed to take forever for the histogram to come up, and if you took a fair-sized sequence of images in rapid fire succession, you were really in trouble. The full frame sensor, though seemingly a negative for bird photography, actually allowed you to crop significantly and still wind up with far more pixels than you would have had with 1D images.

The 1Ds had problems with digital noise beginning at times (in images with dark tones) at ISO 400. With the three amazing Mark II digital cameras available by 2005, the 1Ds seems like a dinosaur, but a venerable dinosaur it is. Today, however, it is still an excellent choice for landscape, macro, wedding, and studio photographers and photojournalists. Used models are available for about one-quarter of the original street price so it is an economical choice as well.

King Vulture, captive, Los Angeles Zoo, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS 1 Ds. ISO 250. Evaluative Metering -2/3 stop: 1/250 sec. at f/18. Fill Flash with Better Beamer at -1 stop.

Though I enjoyed working with the 1Ds, it is, by today's standards, much too slow to consider as a workhorse body for bird photography.

Fall color, Kodachrome Pass, Denali National Park, AK

Canon 28-135mm IS lens (handheld at 41mm) with EOS 1 Ds. ISO 400. Evaluative Metering at zero: 1/80 sec. at f/16.

The 1Ds and other cameras with full-frame sensors enable photographers to take advantage of the full range of wide-angle focal lengths.

Snow Geese blast-off, Ed Krane pool, Bosque Del Apache NWR, San Antonio, NM

Canon 28-135mm IS lens (handheld at 28mm) with EOS 1 Ds. ISO 250. Evaluative Metering +2/3 stop: 1/250 sec. at f/11.

I needed every millimeter of focal length at the wide-angle end here to squeeze all of the birds and the complete reflection into the frame.

left:
Wood Duck
tight head portrait
Santee Lakes Park, CA

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering -1 stop: 1/250 sec. at f/11.

The 500 IS focuses about two feet closer than the 600, and this is a feature that I appreciate greatly. With the bright sun, the dark water, and the very dark feather tracts on the bird's head, I knew that I would need lots of underexposure to save the white highlights.

Lesser Flamingo, wings only, Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 2XII TC and EOS 1 Ds. ISO 250. Eval. Metering -2/3 stop: 1/1000 sec. at f/11.

When I showed this image, which was a big crop from a vertical, to Jim Brandenburg at a NANPA Summit, he asked me to blow it up to actual pixels. I did. He said, "Nikon digital cameras cannot do that." I got in touch almost immediately with Canon Pro Markets head Dave Metz. After several decades of using Nikon equipment, Jim became a Canon Explorer of Light within six months of that impromptu meeting. The proof is in the pixels.

The Canon EOS-1D Mark II

The EOS-1D Mark II was introduced in late January 2004. I purchased two right off the bat and have absolutely loved them ever since. I used them almost exclusively until late 2005. Their 8 frames per second frame rate and 20 raw-image buffer allow photographers to maximize their chances when photographing birds in flight and in action. Their 8.2 megapixel files met the needs and requirements of most publishers and stock agencies.

The body and controls are virtually identical to the 1D and the 1Ds and the rugged professional feel of those cameras is maintained as well. Like the EOS-1D, the 1D Mark IIs offer a 1.3 multiplier effect that is a boon for bird photographers. The 1D MIIwas the first Canon body to offer the user the ability to switch quickly any AF sensor to a preselected sensor or metering pattern. I use the central sensor as my preregistered point. This feature allows me to switch from 45 Point AFPS to central sensor almost instantly. Though I am really tough on my equipment, both of my 1D Mark II bodies have performed flawlessly in a variety of conditions, from the 100 degree plus temperatures of a Tanzanian summer to Homer Alaska's -5 degrees in February 2005. I have created several thousands of family-jewels type images with my 1D MIIs, and they will—regardless the improvements in future generation Canon cameras—always have a special place in my heart.

Little Blue Heron, adult in flight, Lake Martin, LA

Canon 400mm f/4L IS lens with EOS 1 D Mark II. ISO 800. Evaluative Metering +2 stops: 1/800 sec. at f/8 with on-camera Fill Flash at -1 stop with Better Beamer and High-Speed Synch.

Above all else, the Mark II 1D is a superb flight photography camera. The effective focal length with my old favorite "toy lens" is 520mm. Noise levels at ISO 800 are remarkably low.

Lark Sparrow on barbed wire, Forshage Ranch, Edinburg, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/11. Fill Flash at -1 stop.

As these birds sat still for a few seconds at a time, I used OneShot AF, focused on the eye, and recomposed to ensure accurate focus.

left:
Sea oats at sunset
Fort DeSoto Park, FL

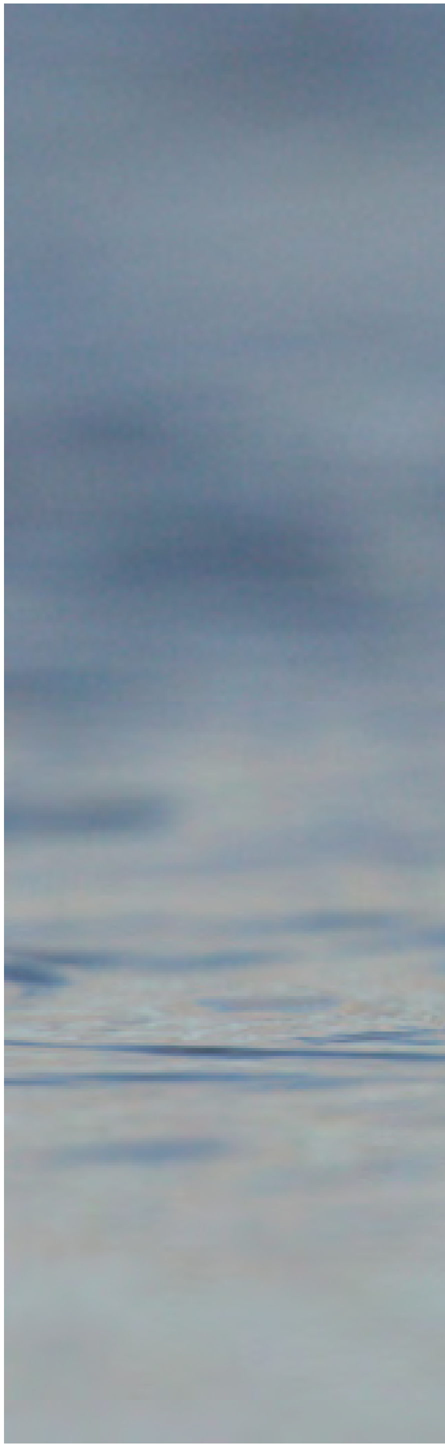
Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 50. Evaluative Metering at zero: 1/250 sec. at f/5.6.

Obviously, the key to making an image like this work is to put your outfit in exactly the right spot. I remember doing that several times, often moving the tripod only an inch or two. Paying attention to small detail is probably the biggest secret of successful photographers.

right:
Blue-winged Teal
winter female
Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with 2XII TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/11.

Limited to the central sensor with the 2X, I placed it on the bird's back just this side of the centerline so as to be on approximately the same plane as the near-eye. This bird was giving me fits, swimming in and out of groups of roosting shorebirds. After almost an hour I got one perfect frame with a good light angle.



Golden Orb Spider
Washington Oaks St. Park, FL

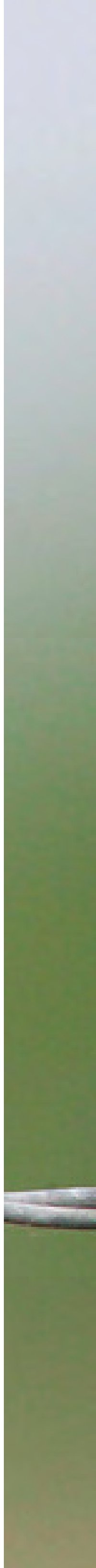
Canon 500mm f/4L IS lens with 62mm of extension and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/4.

Using several extension tubes with a big lens can turn it into a pretty good macro lens with a very narrow angle of view.

Loggerhead Shrike
with Texas Horned Lizard
Forshage Ranch
Edinburg, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/11. Fill Flash at -2 stops with Better Beamer and high-speed synch.

When I first saw this bird with a mouthful of who-knows-what it was on the wrong side of the road, i.e., it was severely backlit. Much to my surprise and delight, it flew to the other side of the road, and when I saw what it was holding I about had a cow. In such circumstances you need to be 100 percent confident in and familiar with your camera. The difference between success and failure is often a matter of seconds.



above:
Bald Eagle, post-strike, Homer, AK

Canon 70-200mm f/2.8L IS lens with EOS-1D Mark II. ISO 400. Manual Exposure: 1/2000 sec. at f/5.6 confirmed by histogram.

Here, the 1D Mark II's AF system performed superbly, nailing sharp focus on the eagle's eye with 45-Point AFPS in AI Servo mode.

facing page:
Great Egret, Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/250 sec. at f/8.

The meter on the 1D Mark II is pretty much identical to the meters on Canon's other pro bodies. With the black background, which was actually woods in shadow, I knew that I would need some extra underexposure to keep from burning the rim-lit white feathers.

Little Blue Heron displaying Lake Martin, LA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS 20D. ISO 800. Evaluative Metering +2/3 stop: 1/125 sec. at f/5.6.

The 20D on the 500mm with a 1.4 yields an effective focal length of 1120mm; this translates to approximately 23X magnification.

The Canon EOS 20D

The EOS 20D, which was introduced in August 2004, is simply an improved 10D (see above) with an 8.2 megapixel sensor, double the buffer space (of the 10D), and a greatly improved autofocus system. With an initial street price about $500 less than that of its predecessor, it proved to be an immensely popular camera. I owned a 20D for about a year and used it several times. I was pleased with the performance and with the results. I am not, however, a big fan of the nine-point diamond-shaped AF array, as the sensors on each end are—in my opinion—too close to the frame edges. Several really talented photographers like E. J. Peiker and Patti Ardoin actually prefer the 20D to the Mark II 1D (for reasons that I will never understand...). While a great camera for the price, and possibly the greatest digital camera value ever at the time of its release, the 20D seems somewhat a toy in my hands when compared to any of the Canon professional digital bodies.

Like the 10D, the 20D focuses only to an effective aperture of f/5.6. You'll enjoy AF with the 20D with a 1.4X TC on an f/4 or faster lens. It will focus with the 2X TC only with f/2.8 lenses. Folks using the 1.6X multiplier camera bodies like the 20D with 500mm and 600mm lenses will have to focus manually if they opt to use them with the 2X TCs, but with the 1.6 crop factor, this is rarely necessary. In fact, in many situations, a 1.6X camera on either of these lenses yields too much effective focal length. Magnification with the 1.4 X TC is roughly equivalent to that afforded when using a 1.3X camera with a 2X TC. Although AF on the 20D does not acquire as quickly as with the pro bodies, I do believe that in many cases it's more accurate at tracking subjects coming towards the camera than its more expensive cousins.

Black-crowned Night-Heron, strutting display, Lake Martin, LA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS 20D. ISO 400. Evaluative Metering +2/3 stop: 1/800 sec. at f/8.

Another advantage of the 10D and 20D cameras when used with the big lenses is their significantly lighter weight.

Bald Eagle and mountains, Homer, AK

Canon 70-200mm f/2.8L IS lens (at 200mm) EOS 20D. ISO 400. Eval. Met. -3 stops set manually: 1/160 sec. at f/16 with pop-up flash as main light.

Here I underexposed the background three stops and let the flash light the bird. The pop-up flash on the 20D can be surprisingly effective.

Brown Pelican, Sanibel Island Causeway, FL

Canon 300mm f/4L IS lens with EOS 20D. ISO 400. Evaluative Metering at zero: 1/1000 sec. at f/8.

The 300 f/4 and a 1.6X multiplier camera body makes a great starter outfit that is extremely light in weight.

Great Blue Heron, Sanibel Island Causeway, FL

Canon 300mm f/4L IS lens with EOS 20D. ISO 1600. Evaluative Metering +1 stop set manually: 1/640 sec. at f/4.

For an ISO 1600 image, this photograph does not exhibit much noise at all. When I need the speed to make an image, I go for it.

Sunrise reflections, Kinak Bay, Katmai National Park, AK

Canon 70-200mm f/2.8L IS lens (handheld at 200mm) with EOS 20D. ISO 800. Evaluative Metering +1/3 stop set: 1/640 sec. at f/2.8.

I created this image from the skiff well before sunrise. In retrospect, I wish that I had had the boat stopped...

Canon EOS-1Ds Mark II

When the EOS-1Ds Mark II was introduced in September 2004, I was not first on line to purchase one. I was so in love with my 1D Mark IIs, their speed, and their 1.3 crop factors that I kept my head stuck in the sand… I was not interested in the huge files with their accompanying storage problems and I was not interested in another full-frame-sensor digital camera (with no multiplier effect). On my two bear trips during September 2005, however, it was Robert O'Toole who opened my eyes to the amazing image quality provided by the incredible 16.7 megapixel 1Ds MII files. When a 1Ds MII image is enlarged to actual pixels in Photoshop, the images are unlike anything you have ever seen before. The quality is simply amazing, the images so smooth in appearance as to resemble the subject in life. And the detail revealed in a sharp 1Ds MII image is simply astounding. The images from this camera simply blow away 35mm film images and in the opinion of many more knowledgeable than I, rival or surpass medium format film images.

I made a few photos with Robert's camera and was so taken with the results that I ordered my own Mark II 1Ds as soon as I returned home. I used it sparingly in October and gave it a good test at Bosque in November 2005. The huge files allow me to crop at will. My understanding is that if you crop a 1Ds MII image to the same subject size as a 1D MII image, the former will still have 28 percent more pixels (and in addition, those pixels will be of higher quality). But the proof is in the pudding, and the pudding is indeed sweet, creamy, and fulfilling.

Many of the flight images that I created with the 1Ds MII (with both 45-Point AFPS and with central sensor only) were extremely sharp. And with static subjects the ability to crop substantially and still wind up with files well larger than 1D Mark II files helps folks to quickly get over their reliance on the seeming loss of the latter's 1.3X crop factor. Though seemingly lethargic when compared to the 1D Mark II, the 4 frames per second frame rate is nothing to sneeze at. With an 11 raw image buffer and much faster write speeds than its predecessor, the 1Ds, the Mark II 1Ds is far better able to handle the long bursts of consecutive images that are often required in flight or action situations.

The image above, which represents an "Actual Pixels" view, was cropped from the original image (facing page). You can do a lot with 16 million pixels.

Red-shouldered Hawk on wire
Indian Lake Estates, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/11.

When you get a new camera you want to go out immediately and make a few images, and that is exactly what I did when I got my 1Ds MkII. I was amazed by the superb quality of the image files, just as I had been at Silver Salmon Creek Lodge when Robert O'Toole loaned me his 1Ds MII for a day.

Red-shouldered Hawk with small snake
Indian Lake Estates, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/100 sec. at f/8.

It is hard to realize that you can make huge crops and still wind up with more pixels than if you had created a similar image with a 1D Mark II. You actually need to change your thinking when it comes to framing and designing images with the 1Ds MII.

Northern Pintail, drake, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/800 sec. at f/11.

This image was created with cloudy white balance in soft afternoon light. I like the way that the reflections of the yellow grasses surrounding the pond match the tones of the pintail's head. I do not recall an image of this species that shows the green edges of the tertial feathers.

Snow Goose, sunrise flight through yellowed grasses, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 250. Manual Mode: 1/800 sec. at f/9.

Determining the exposure in situations like this requires a good guess followed by some good luck. If the really bright reflections dominate, you need a really dark exposure; if there are none, you need to be much lighter. I was a bit over here, but I converted darker and saved the highlight detail.

White-crowned Sparrow in early morning light, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/500 sec. at f/11.

Stopping down to f/11 when working with a 2X TC at point-blank range with sufficient light is good technique as it yields a bit of extra sharpness.

White-crowned Sparrow in bush, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/160 sec. at f/11.

Cloning away an out-of-focus foreground branch here took about ten minutes; with all the extra pixels to work with, the results were superb.

Sandhill Crane in flight, wings in full upstroke, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Eval. Metering off the yellow grasses set manually: 1/1250 sec. at f/8.

I was pleasantly surprised with the sharpness of many of my 1Ds MIIflight images. With flight photography, I almost always prefer that the wings be in either the full upstroke (as here) or in the full downstroke position.

Sandhill Cranes in cornfield at dusk, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/50 sec. at f/10.

Moments before, this scene featured amazing yellow backlight... Alas, I like this one anyway, especially all of the background crane heads.

Canon EOS-1D Mark II N

The 1D Mark IIN, which was released in August 2005, is basically identical to the EOS-1D Mark II camera that I love so dearly. The N has a 2 ½-inch-wide LCD on the rear of the camera, much larger than on the 1D MII or any other Canon digital body. The larger LCD is a big improvement and a godsend for those with poor vision. In addition, it has a larger buffer (22 raw images) than its predecessor.

Several fairly prominent photographers are of the opinion that compared to the EOS-1D Mark II, the EOS-1D Mark II Nproduces sharper files with much better detail in the highlight areas and believe that the autofocus system in the N is greatly improved. I had a chance to road test the 1D Mark IIN in New Mexico for a few days in November 2005 and saw no differences at all in sharpness, highlight detail, or AF accuracy. That said, I have two on order from Canon so that I can enjoy the larger LCD and the larger buffer.

Greater Roadrunner, crest raised, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II N. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/11.0.

Handling and operating the 1D MkIIN was a snap as all of the controls are identical to those on my 1D MII bodies.

Snow Geese, purple wide-angle blur with crescent moon, Bosque Del Apache NWR, San Antonio, NM

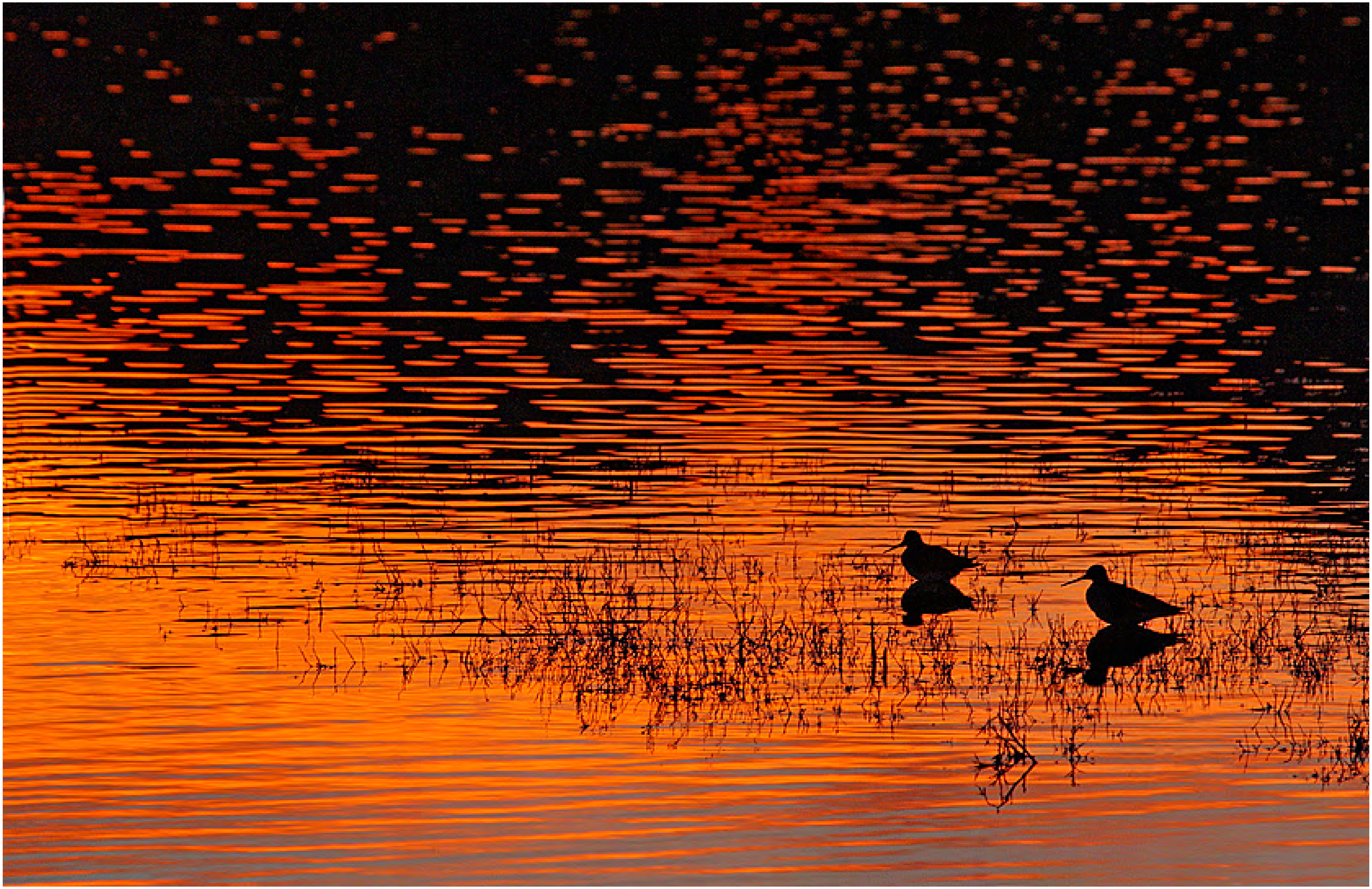
Canon 16-35mm zoom lens (handheld at 35mm) with EOS-1D Mark II N. ISO 800. Evaluative Metering +2/3 stop: 1/500 sec. at f/2.8.

It is a good plan to have a wide-angle lens close by at Bosque, as the sky directly overhead often fills with thousands of geese in a matter of seconds.

Sandhill Crane braking to land, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II N. ISO 640. Eval. Met. + 1/3 off grasses: 1/1000 sec. at f/10 in Manual Mode.

I usually do not like the cornfields as background but this one works for me. The 1D MkIIN and the 2X auto-focused accurately in most situations.



Greater Yellowlegs at sunset, Harry's Crane Pool, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm zoom lens (handheld at 320mm) with EOS-1D Mark IIN. ISO 800. Eval. Met. at zero: 1/250 sec. at f/10 in Manual Mode.

I would have preferred to use a tripod here, but I was afraid that the color would fade by the time I set up... Note the rule-of-thirds image design.

My Canon Pro Body Setup

Here is how I set up the menu choices on my Canon EOS-1D Mark II and EOS-1Ds Mark II camera bodies:

Parameters: Standard
Color Matrix: 4 Adobe RGB
Review: On
Review Time: 4 sec.
Noise Reduction: On
ISO Expansion: On

Highlight Alert: On
Display AF Points: On
Histogram Display: Bright

Auto Power Off: 30 minutes
File Numbering: Continuous
Auto Rotate: On

LCD Brightness: High
Date/Time: Be sure to set this info accurately on all cameras
Language: English

All Custom Functions are kept at the default settings except as follows:

CF-2. Shutter Release Possible Without Card: 1-Not Possible (I call this the idiot-proof CF as setting CF-2-1 makes it impossible to work without a CF card in the camera.)

CF-8. Top LCD Panel/Back LCD Panel: 1: ISO/Remain. Shots. Setting CF-8-1 shows the ISO on the top LCD and the approximate number of images left on the small LCD that contains the White Balance setting symbols. Do note that the number of remaining images left before the buffer is full appears on the right side of the viewfinder directly below the vertical analog exposure scale.

CF-9. Auto Bracketing Sequence/Cancel: 1: 0, -, +/No Cancellation. Setting CF-9-1 sets the order of bracketing exposures at 0, darker, lighter and keeps the bracketing in effect even when you change lenses or turn the camera off and then on again.

CF-10. AF Point Illumination: 3: Brighter.

CF-15. Shutter Curtain Synchronization: 1: Second Curtain Synchronization. Setting CF-15-1 ensures that the apparent shadow/ghosting of ambient motion blur will appear ***behind*** the bird when I am using flash in conjunction with slow shutter speeds and the correct ambient exposure.

CF-16. Safety Shift in Av or Tv: 1: Enable. This automatically corrects the aperture or the shutter speed (respectively) when you have chosen a value beyond those that would permit a correct exposure. I wish that the Safety Shift option was available when using flash…

CF-17. AF Point Activation Area: 2: Automatic Expand (max. 13) This expands the number of active AF sensors to 13 surrounding the manually selected AF sensor. If I live long enough, I may figure out which is the best setting here: 0: Single AF Point, 1: Expand to 7 AF Points), or 2: (as above)…

CF-18. Switch to registered AF Point: 1: X/WB +/_. Setting CF-18-1 allows you to switch instantly to a preregistered AF sensor by depressing the X/WB +/ button. It is the third button to the left on the upper right rear corner of the camera (just to the left of the * button which is also the Reduce Magnification button. To preregister a selected point (which is usually the central sensor), first set that point manually and then press the FEL button and the X/WB +/ simultaneously. Thereafter, whichever AF point or points you have selected, you can return to the central sensor simply by pushing the X/WB +/ button.

CF-20. AI Servo Tracking Sensitivity: 3: Moderately Fast. This is another CF on which the jury is still out… No matter how I set this one, I do not see much difference in the results.

I do not use any Personal Functions. I create images in Raw Mode at all times. I do not add a J-PEG as the images from these cameras contain an embedded J-PEG. I utilize auto-White Balance most of the time, but often convert images in BreezeBrowser using either the Cloudy or Shade White Balance settings. I rarely delete images on camera.

Nikon D2X

I have chosen to include a short write-up of the Nikon D2X because it is the first Nikon Digital Camera that both Todd Gustafson and the many Nikon-using folks on IPTs have ever raved about consistently. With the previous Nikon bodies all that I ever heard were complaints about slow initial autofocus acquisition, the inability of the AF system to focus at all in low light, and incessant AF hunting. (Note that while the world was complaining about the early generation Nikon digital cameras, professional photographer and friend Chas Glatzer was creating amazingly sharp images of birds in flight coming right at the camera at point-blank range using various Nikon digital bodies… Somewhat ironically, Chas switched to Canon several years ago and continues to make great images.)

The D2X offers 12.2 megapixel files that incorporate a 1.5 X multiplier effect or, when using high speed crop, 6.8MP files with a 2X multiplier factor. The frame rate is 5 frames per second advance with 12.2MP files and 8 frames per second with the cropped 6.8MP files. The buffer accepts 15 full-sized NEF images or 26 high speed cropped NEF images. The D2X is more than 10 ounces lighter than the Canon pro bodies, mainly because of its lighter lithium ion battery pack. The rear LCD is a generous 2 ½ inches wide. The AF system offers a range of attractive options based on an 11 focus-area setup. Huge improvements on the 1DX include instant image display and greatly lengthened battery life. But the main reason for the oohing and aahing is the improved AF system, which attains focus almost instantly and consistently maintains accurate focus on birds in flight or in action.

•••••

Violet Saber-wing Hummingbird, Costa Rica

Nikkor 600mm f/4 AF-S lens with Nikon D2X. ISO 800. Matrix Metering at zero: 1/180 sec. at f/4.

Todd is thrilled with the performance of and the images from his D2X.

Image Copyright 2005: Todd Gustafson

Nikon Equipment

Gallery

all images courtesy of
Todd Gustafason

Northern Harrier, female hovering
Bosque Del Apache NWR, NM

Nikkor 600 mm f/4 AF-S lens (handheld) with Nikon D2X. ISO 100. Matrix Metering -1/3 stop: 1/2000 sec. at f/4.

Note that Todd handheld his 600 while working from his vehicle. With the D2X, Todd has, with good reason, finally stopped complaining about Nikon autofocus. In 2005 Todd used both Canon and Nikon digital equipment and made great images with both systems. Good photographers make good images with whatever equipment they have in their hands.

Image Copyright 2005:
Todd Gustafson

Woodland Kingfisher, Tarangire National Park, Tanzania

Nikkor 600 mm f/4 AF-S lens with 2X TC-20E (on Todd-Pod) and Nikon D1X. ISO 400. Matrix Met. +1/3 stop: 1/125 sec. at f/8.

Todd's sharpness techniques are so good that he is the only Nikon user I know of capable of making consistently sharp images with the 600 f/4 and a 2X TC (without VR!).

Red-billed Oxpecker atop head of Cape Buffalo, Shimba Hills, Kenya

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D1X. ISO 100. Matrix Metering at zero: 1/250 sec. at f/8.

When you possess almost instantaneous creative vision, are quick and strong, and have an intimate knowledge of your subject matter, making great images consistently is a given.

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Todd Gustafson

Images Copyright 2005: Todd Gustafson

both: African Elephant. left: With small calf, Tarangire National Park, Tanzania. above: Aggressive display, Samburu, Kenya

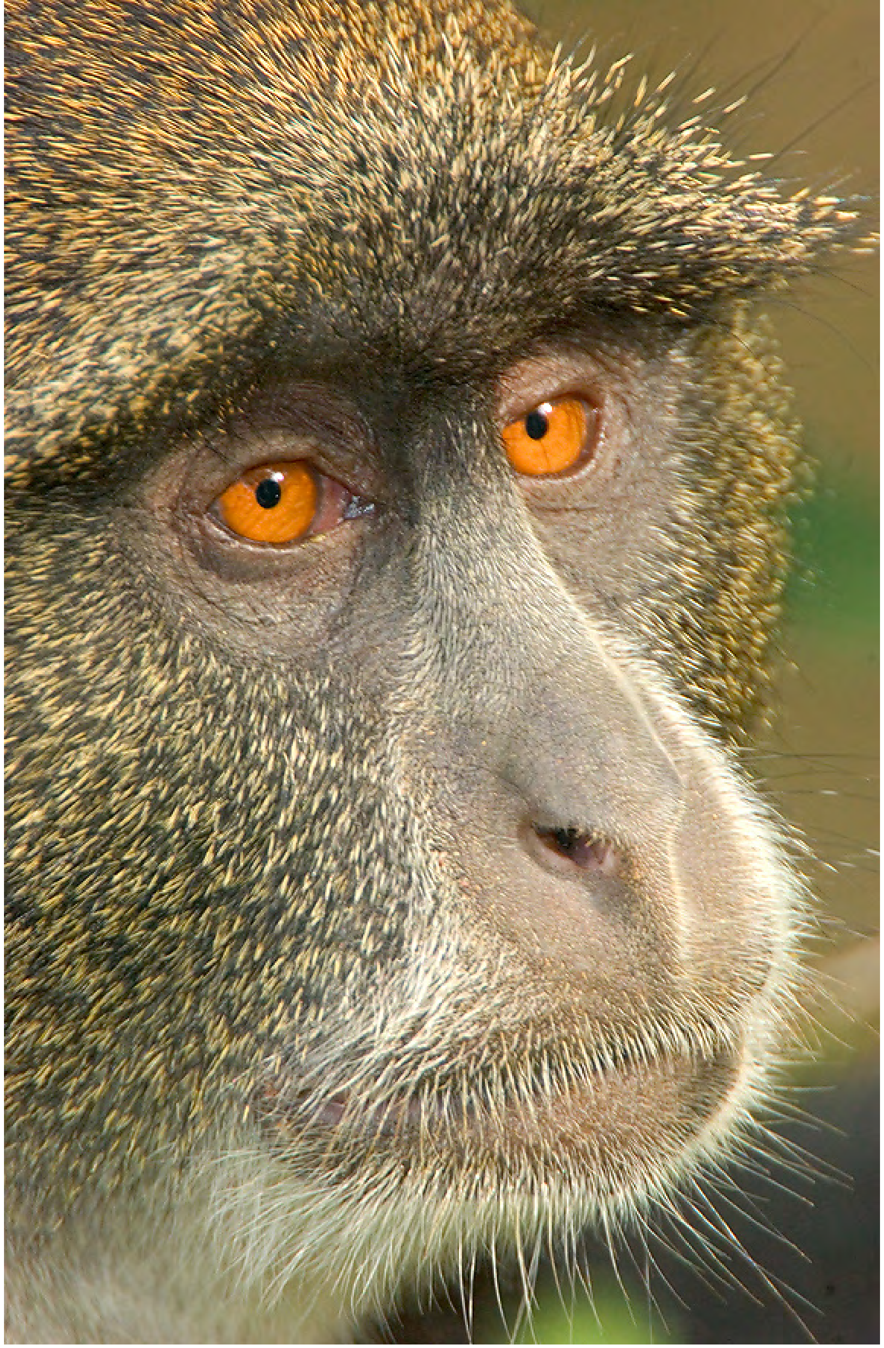
left: Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D1X. ISO 200. Matrix Metering at zero: 1/160 sec. at f/6.
right: Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D1X. ISO 320. Matrix Metering at zero: 1/2500 sec. at f/4.

As these two images show, Todd is as fast to see a situation developing and as quick to make the image as anyone I have ever seen.

Golden Palm Weaver. Mombassa, Kenya

Nikkor 600mm f/4 AF-S lens with 2X TC 20-E and Nikon D1X. ISO 200. Matrix Metering -1 stop: 1/400 sec. at f/10. Fill Flash at -1 with Better Beamer.

Images Copyright 2005: Todd Gustafson



Blue Monkey, Arusha National Park, Tanzania

Nikkor 600mm f/4 AF-S lens with 2X TC-20E (on Todd-Pod) and Nikon D1X. ISO 500. Matrix Metering at zero: 1/125 sec. at f/8. Fill Flash at -1 with Better Beamer.

Flappet-eared Chameleon, Ndutu, Tanzania

Nikkor 200-400mm f/4 VR zoom lens with 1.4X TC-14E (handheld at 420mm) and Nikon D1X. ISO 200. Matrix Metering -1 stop: 1/500 sec. at f/11 w/pop-up flash at -1.

Iguana, Costa Rica

Nikkor 200-400mm f/4 VR zoom lens with 1.7X TC-17E (handheld at 460mm) and Nikon D2X. Matrix Metering +2/3 stop: 1/200 sec. at f/7.1.

left: Cheetah, face
Samburu, Kenya

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D1X. ISO 400. Matrix Metering at zero: 1/250 sec. at f/7.6.

Todd has a superb sense of image design and composition. If you ask him, he would tell you that I taught him everything that he knows about those topics...

right: Hippopotamus yawning and Common Sandpiper
Lake Manyara, Tanzania

Nikkor 200-400 f/4 VR zoom lens with 1.4X TC 14-E (handheld at 250mm) with Nikon D1X. ISO 400. Matrix Metering at zero: 1/200 sec. at f/7.1. Fill Flash at -1 stop with Better Beamer.

Todd has hippo ESP. He knows in advance which one of a dozen is going to yawn...

Images Copyright 2005
Todd Gustafson

right:
Cinnamon-chested Bee-Eater, Lake Manyara, Tanzania

Nikkor 600mm f/4 AF-S lens with 2X TC-20E (on Todd-Pod) and Nikon D1X. ISO 400. Matrix Metering at zero: 1/500 sec. at f/8. Fill Flash at -2 stops with Better Beamer.

Images Copyright 2005
Todd Gustafson

above:
Leopard, Seronera River, Tanzania

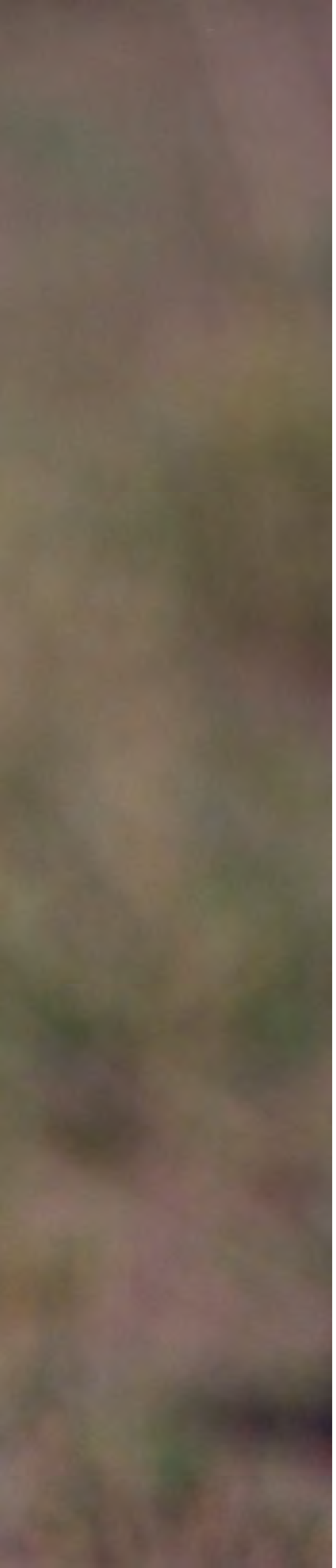
Nikkor 600mm f/4 AF-S lens with Nikon D1X. ISO 200. Matrix Metering +1/3 stop: 1/180 sec. at f/6.7. Fill Flash at -1 stop with Better Beamer.

right: Zebra foal running, Ndutu, Tanzania

Nikkor 600mm f/4 AF-S lens with 1.4X TC-14E (on Todd-Pod) with Nikon D1X. ISO 200. Matrix Metering at zero: 1/180 sec. at f/6.7.

right:
Maasai Giraffe group, Lake Manyara, Tanzania

Nikkor 200-400 VR zoom lens (handheld at 220mm) with Nikon D1X. ISO 500. Matrix Metering at zero: 1/250 sec. at f/4.



left: Spotted Hyena with Wildebeest leg, Ndutu, Ngorongoro Conservation Area Tanzania

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D2X. ISO 200. Matrix Metering at zero: 1/1600 sec. at f/4.

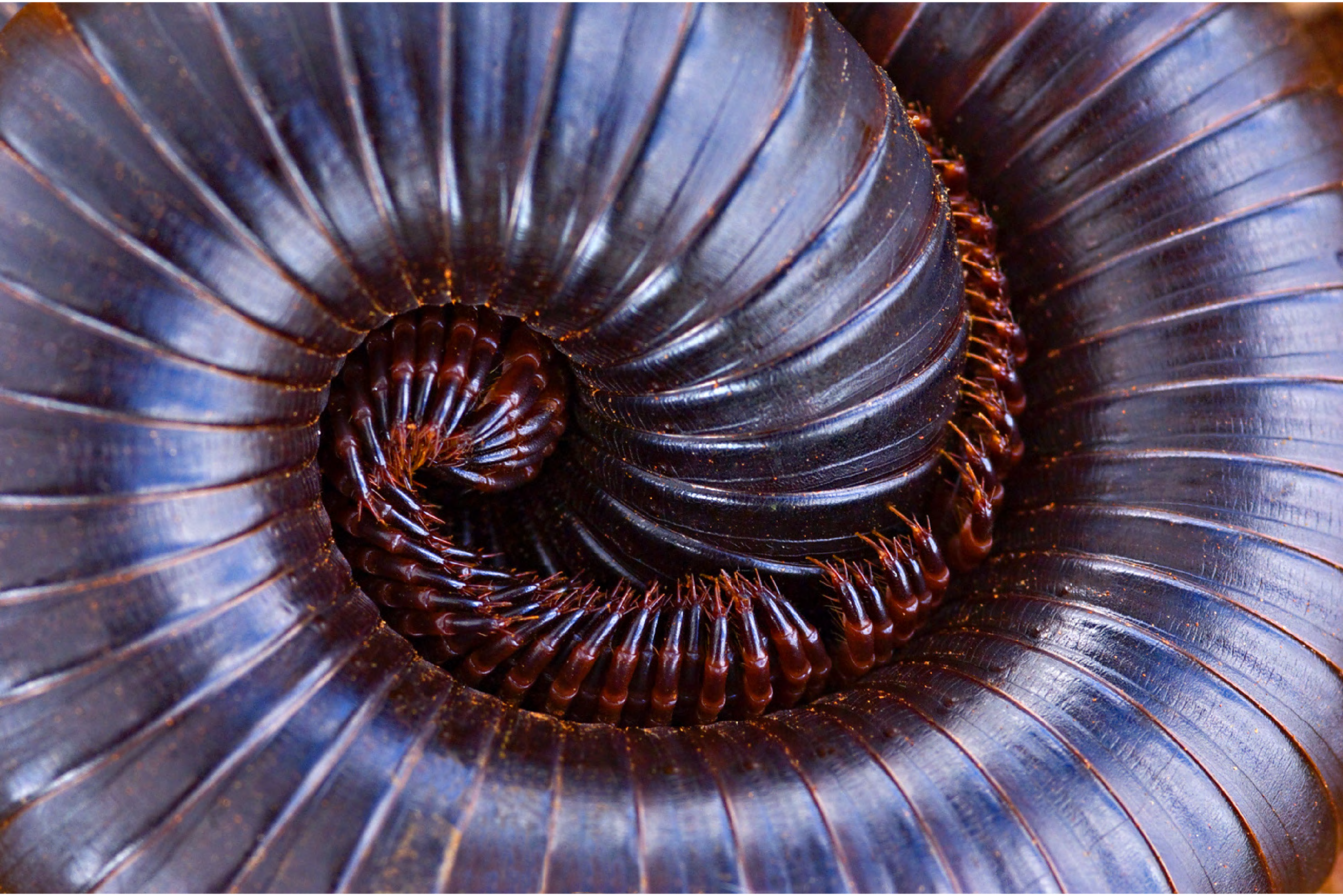
Todd's safari instincts are remarkable. All of our vans hung around a lion kill off and on for two hours. Only Todd's van was there for the magic...

right: African lion with attitude... Ndutu Ngorongoro Conservation Area Tanzania

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with 1.7X TC-17E and Nikon D2X. ISO 125. Matrix Metering at zero: 1/400 sec. at f/6.7.

Todd highly recommends the 1.7X TC-17E. Since he trashed his old 2X TC-20E he has been unable to come up with another 2X teleconverter capable of creating sharp images.

Images Copyright 2006 Todd Gustafson



left:
Tanganyika Train millipede
Tarangire National Park, Tanzania

Nikkor 105mm macro lens handheld with Nikon D2X. ISO 640. Matrix Metering -1 stop: 1/25 sec. at f/18.

right:
African Elephant
coiled trunk
Lake Manyara National Park
Tanzania

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D2X. ISO 800. Matrix Metering at zero: 1/90 sec. at f/4.8.

Todd enjoys presenting thematically paired images. In looking at Todd's images note the wide range of ISO settings that he employs.

Images Copyright 2006
Todd Gustafson

Wildebeest crossing, Mara River, Maasai Mara National Reserve, Kenya

Nikkor 80-400mm VR zoom lens (handheld at 80mm) with Nikon D1X. ISO 160. Matrix Metering at zero: 1/320 sec. at f/5.

The 80-400mm focal length is extremely versatile; it is a valuable lens on safari, especially for folks who do not own the 200-400 VR.

Dik-dik, peering from behind tree
Lake Manyara National Park, Tanzania

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with 1.7X TC-17E and Nikon D2X. ISO 250. Matrix Metering at zero: 1/125 sec. at f/6.7.

Todd loves working with extremely long effective focal lengths (here 600 X 1.5 X 1.7 = 1530 mm, or approximately 30.6X magnification) as much as I do.

above: Cheetahs chasing Wildebeest herd
Ndutu, Ngorongoro Conservation Area, Tanzania

Nikkor 80-400mm VR lens (handheld at 400mm) with Nikon D100. ISO 200. Matrix Metering at zero: 1//20 sec. at f/13 in Tv mode.

Todd created the image above by following this advice: "When unexpected action ocurs, push the shutter button without worrying about shutter speed or anything else." That is easier said than done; eight other photographers (including myself) came up empty on the chase scene...

below: African Elephants crossing river
Samburu National Reserve, Kenya

Nikkor 80-400mm VR lens (handheld at 130mm) with Nikon D100. ISO 200. Spot Metering (off water) at zero: 1//1000 sec. at f/8 in Program mode.

Here, Todd pushed the shutter button at the absolute perfect instant...

Southern Ground Hornbill with small frog prey, Lake Manyara National Park, Tanzania

Nikkor 600mm f/4 AF-S lens (on Todd-Pod) with Nikon D2X. ISO 250. Matrix Metering -2/3 stop: 1/250 sec. at f/9.

The 600 Nikkor with the D2X yields and effective focal length of 900mm.

Tanzanian Dwarf Chameleon, Ngorongoro Crater, Tanzania

Nikkor 105mm macro lens handheld Nikon D100. ISO 550. Matrix Metering at zero: 1/100 sec. at f/18.

Todd always brings his 105 macro lens on safari and consistently creates dazzling images with it.

Tundra Swans, Nome, Alaska

Canon 28-135mm IS L zoom lens (handheld at 75mm) with EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/60 sec. at f/13 in Av mode.

Good photographers take great care when designing their images: attention to detail is of the utmost importance when fine-tuning a composition.

Chapter II

Advanced Composition and Image Design

Creative Vision

Are some folks born with an artistic eye? Can the skills needed to design photographs that are compositionally pleasing and those needed to create dynamic and powerful images be taught? If a group of photographers looks out on a grand scene and only one or two see the most powerful composition instantly, is there hope for the others? Is it possible for one person to teach another to see and think creatively? For the past two decades I have struggled with the answers to these questions. I believe that the answer to each of them is "Yes." Some folks are—for sure—born with an artistic eye while others are not, but the folks in the latter group can learn to design images that are both pleasing and powerful; they can learn to develop and improve their creative vision.

Folks with creative vision venture afield with eyes wide open, looking about in all directions. As they observe the natural world, much of it looks ordinary, but there is often something that catches their eye. Why? There are countless factors that come into play. Color (either bright hues or the more subtle earth tones) may provide the initial spark. Shapes, lines (especially diagonal and curved lines), textures, reflections, silhouettes, and movement often play a role, as can the quality and direction of the light. For bird photographers it can be a new species or a plumage they have not seen before, interesting behavior, or even a common bird in a wonderful setting that catches their eye. When you see something that sparks your interest, ask yourself, "Is what I see interesting enough or beautiful enough to photograph?" (When a situation is really good you will scarcely be able to contain your excitement...) Now visualize the image that you would like to create and decide which lens would best be used to capture it. In bird photography, the choice is often—but not always—your longest lens.

Do you need to change your position to make the image that you want? Do you need to get closer or move farther away? How would moving left or right or up or down affect the angle of the subject relative to the imaging sensor or the film plane, the arrangement of compositional elements within the frame, or the play of light upon the subject? Some may need to ***physically change their position*** in order to see how a change in perspective would affect the image. Others are able to ***imagine*** how the image would look if they were, for example, to move ten feet left and kneel (rather than stand) behind their (lowered) tripod. If you fit into the former category, the best advice that I can give is to begin by physically changing your position and noting how each new perspective affects the image. Do this often enough and one component of your creative vision will improve: you will find that in more and more situations you will be able to "see" from other vantage points without having to physically change your position. This is one big key to developing your creative vision.

In situations where there seems to be nothing exciting to photograph, or when low light levels are a problem, creative photographers may think about slow shutter speeds and the possibility of creating some intentional (or necessary) blurs. And in addition, they will sometimes

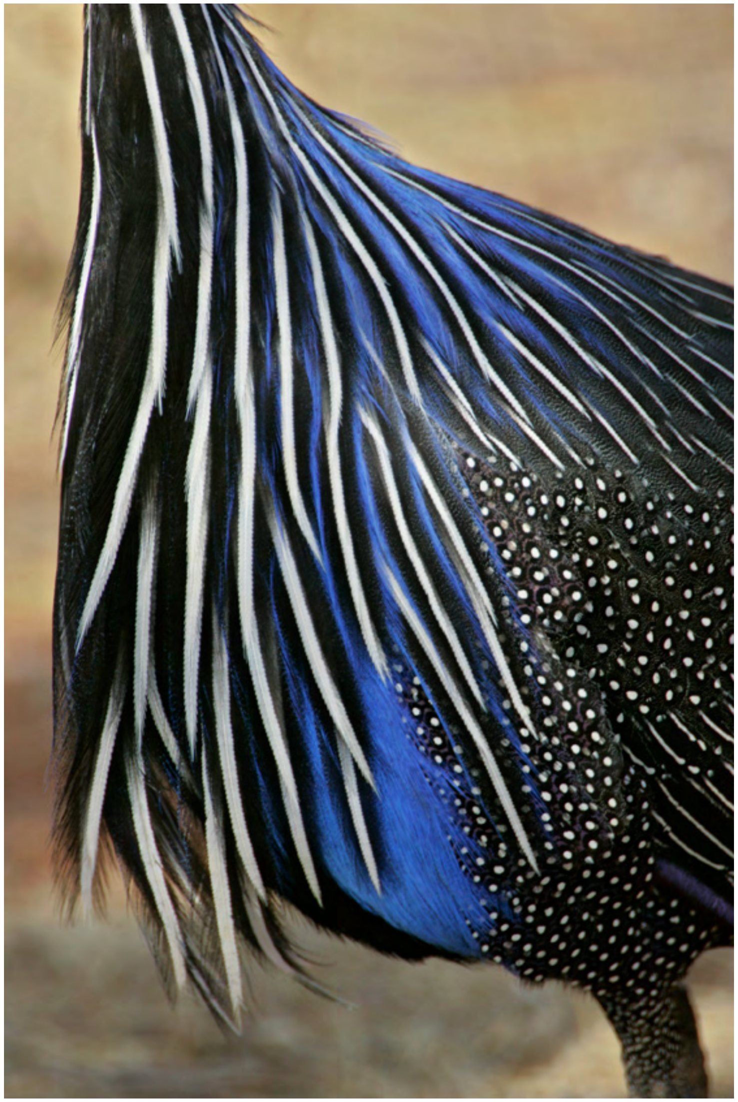
think this way even when there is lots of light. In these cases, choosing and using a low ISO or a slow film can help you get a shutter speed that is slow enough to yield the blurred results that you want. For single birds flying close to the camera, a shutter speed in the range of 1/30 to 1/125 second will yield pleasing blurs, while shutter speeds as slow as 1/6 second (or even slower) will create pleasingly blurred images of distant flocks. An option for creating blurred bird-scapes is to move or shake the camera during relatively long exposures while hand-holding or by shaking the lens or panning with it when working on a tripod.

I tend to view the world "tele-photographically," that is, as if looking through a telephoto or super-telephoto lens. I see the world in small rectangular frames (either horizontal or vertical ones) at various focal lengths. Four of my favorites are 700, 840, 1000, and 1200mm. Walking down Broadway, most folks would be taken in by the grandeur, by the kaleidoscope of color and the tumult, and by the sheer height of the buildings. My eye would more likely be drawn to the reflections in a skyscraper's mirrored windows or the craggy features of a sleeping wino, this the result of years of looking through long lenses at a variety of natural history subjects. It is, for the most part, how I see the world.

Guidelines for Advanced Composition and Image Design

When I was a fledgling photographer living in New York City, there were many local camera clubs with lots of members who enjoyed nature photography. In spite of the fact that I was extremely competitive in sports, especially three-man half-court basketball, and in spite of the fact that my friend Robert Villani, a member of two of those clubs, consistently walked away with blue ribbon after blue ribbon, I refused to join a camera club. Why? Because they had rules for art. I remember thinking, "There are no rules for art. If it's good, it's art. If it moves people, it's art. If ***I*** like it, then that's all that matters."

It is ironic that nearly two decades later, after pushing the shutter button tens of thousands of times, after teaching dozens of full-day seminars, and after leading seemingly countless BIRDS AS ART Instructional Photo-Tours, I have come to realize that much of what seemed to be intuitive artistic sense can actually be codified as a series of guidelines… And while the guidelines that follow are not hard-and-fast rules to be followed blindly, being aware of



Vulturine Guinea Fowl breast, Samburu, Kenya

Canon 500mm f/4L IS Lens with 2X II TC & EOS-1D Mark II. ISO 250. Eval. Met. +1/3 stop: 1/250 sec. at f/8 in Av mode.

It was the color and pattern on the breast and flanks of this species that turned me on, so I used my longest lens with a 2X TC to create the image that I wanted. Actually, I had passed these birds by until I saw some of Todd Gustafson's images... I am never too proud to learn from or be inspired by others.

them can help to drastically improve the artistic quality of your images, as will knowing when and why to break them. Here are my suggestions for advanced composition and image design.

While most folks are familiar with the rule of thirds, how many are familiar with ***the rule of fourths for horizontal compositions***? Subjects that are too large in the frame to be placed in a classic rule-of-thirds position often look great when placed on the horizontal centerline one fourth of the way into the frame. With even larger subjects, one-third of the way into the frame often works very well. And both of these compositions shine when the bird or animal is facing the camera.

In *The Art of Bird Photography* I wrote, "To design a pleasing vertical portrait, simply place the bird on the vertical centerline equidistant from the top and bottom of the frame." I did not, however, emphasize the fact that ***this works well only with large-in-the-frame subjects***. When working with small-in-the-frame subjects in vertical format, it is imperative that ***the bird be kept well out of the center of the frame.*** Placing a small-in-the-frame subject anywhere near the center of a vertical frame is usually a sure way to kill the artistic impact of a photograph. It is almost always best to tuck the subject into one of the corners of the composition and fill the rest of the frame with habitat (or simply with empty space). Such images, however, work especially well when the subject is surrounded by strikingly beautiful habitat.

While a vertical line near either frame edge may work to balance a horizontal composition or to set off a subject, and vertical lines on each side of an image may serve to frame the subject, ***placing a strong vertical line in or near the center of a horizontal frame should almost always be avoided.*** Photographers need to take great care to keep vertical lines away from the centers of their horizontal compositions as the viewer's eye tends to be drawn there and only there.

Least Tern Chick

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds. Evaluative Metering at zero: 1/800 sec. at f/11 in Av mode.

This cute little guy is centered perfectly from the top to the bottom of the frame, but by placing him well back in the frame, a pleasing composition results. This image is a good example of the ***rule of fourths for horizontal compositions.***

While the hallmark of my style is working with single birds set against backgrounds of pure color, there are countless times when including other elements (both natural and man made) in the composition is not only necessary, but desirable. The positioning of these other elements in the frame is exceedingly important. These elements are not, of course, "placed" in the frame; ***the photographer changes the juxtaposition of these elements in the frame relative to the subject's position by changing his or her perspective.*** Shifting the various elements of composition around in the frame by moving left or right, up or down, forward or backward, or some combination of the above, will—with practice—become second nature.

Always strive for compositional balance. The manner in which the elements of an image relate to one another should be pleasing rather than disconcerting. A bird in the lower right corner of the frame might balance a blossom in the upper right. A flock of birds on one side of the frame may balance a stand of reeds on the other. Similarly, blocks of light or dark background colors may balance each other. Do note that the empty or negative space in an image also affects the balance of an image. ***When changing the juxtaposition of the subject and another element of composition, compositional balance should be one of your main concerns.*** If a gull is placed on the horizontal centerline one quarter of the way in from the left frame edge, strive to place the rock or the shell, for example, on the horizontal centerline one quarter of the way in from the right frame edge. If a goldfinch is placed in the upper right third of a vertical composition, try to place a colorful flower or leaf in the lower left third. And so on and so forth…

Bird-scapes are scenic images featuring a bird, or more often a flock of birds, either as an integral part of the composition, or as an accent (or as accents). ***When designing bird-scapes, strive to place a strong compositional element in one (or both) of the lower corners of the frame to strengthen the design of the image.*** A tree, a stand of reeds, or a large boulder placed in one of the lower corners of the frame will help to anchor the image and create a starting point from which you can then lead the viewer's eye around the photograph. When photographing large flocks of birds in flight, I often use a tree or a distinctive mountain peak as described above to serve as a compositional anchor. If the birds are flying from *left to right*, for example, I will generally place the "anchor" in the lower *left* portion of the frame and make photographs as the birds fly past the "anchor" and fill the rest of the frame.

When designing bird-scapes that feature large flocks of birds, a clean lower edge often serves well as a compositional anchor. Strive to point the lens down enough so that a bird-less strip of water, grass, shoreline, mountain- or hill-top occupies the portion of the frame below the lowest bird or birds in the flock, that is, the area at the bottom of the frame. This applies when working in either horizontal or vertical format. The height of this clean lower edge will usually range from one-tenth to one-fourth or rarely one-third of the height of the vertical frame edge. This need not be done when you are making a pattern-type image, that is, when filling the frame totally with a mass of birds from side-to-side and top-to-bottom.

In many instances, an out-of-focus bird in the background is distracting. ***If the photographer, however, takes great care in the placement of the second bird in the frame and considers its posture as well as its position, then the second bird may serve as somewhat of a mirrored (though pleasingly out-of-focus) repetition of the subject. When attempting this, do strive for compositional balance as well.*** The results can be most pleasing. Imagine two Caspian Terns on a sandy beach. It is a cloudy day, so light angle is not of paramount importance. Working in vertical format, you notice that the bird to the rear appears above and slightly to your right of the closer bird. You need to put some separation between the two birds so you take a large, slow step to *your* right. You re-frame the image and notice that the closer bird is in the lower left part of the frame, while the bird in the back now appears in the upper right. The juxtaposition of the two birds is perfect: you have achieved compositional balance. You have created a pleasing image by changing your position, and thus your perspective.

If a compositional element (aside from the subject) is worth including in the frame, it is almost always best to include the whole element (if possible). If you are, for example, including a shell or a bit of seaweed or a small stone or even a tree as a compositional anchor, strive to

Snow Geese on road, Bosque Del Apache NWR, NM

Canon 100-400mm L IS zoom lens (handheld at 200mm) with EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/1250 sec. at f/6.3 in Av mode.

In this bird-scape, many factors contribute to the success of the image: the great sky, the stately tree, the placement of the horizon 1/3 of the way up in the frame, the flock of geese on the road, the four geese against the sky, and the angled road. The bright red bushes in the lower left serve to tie everything together by solidifying the compositional balance.

include the whole object in the frame with a bit of room to spare. Take great care not to cut off any part of the object with the frame edge, and do be sure to leave a small border around it. If you are using a small plant with a blossom to balance an image of a gull chick, strive to frame the image so that the entire plant (and not just the blossom) is included in the final image.

Many of your compositions will—by necessity—feature only horizontal and vertical lines. ***Be on the lookout, however, for strong diagonal or curved lines that will add strength and power to your images.*** Examples might include a crouched Green Heron angled towards the water and ready to strike or the bill of a fledgling Snowy Egret angled across the frame as the young bird awaits the return of the gone-fishing parent. A curving creek or an angled road might work well in a bird-scape. Both diagonal and curved lines are often most effective when they enter or leave the image from one of the corners of the frame. Having a strong diagonal line enter the frame from one of the upper corners can often yield a powerful vertical composition.

Leading lines direct the viewer's eye to the subject. Diagonal and curved lines are especially effective as leading lines. The young egret's bill noted above might direct the viewer's attention to its captivating eye. Shapes and forms may often serve the same purpose. The scapular feathers of a sleeping Brown Pelican resemble an ellipse pointed at both ends. This shape can be used to guide the viewer's eye to the bird's half-opened eye, while the elegant curve of the neck does the same. In such cases, all roads lead to the eye…

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Burrowing Owl pair, Cape Coral, FL

Canon 600mm f/4L IS lens with EOS 20D. ISO 400. Evaluative Metering at zero: 1/1000 sec. at f/4 in Av mode.

Here I used the wide-open aperture to make sure that the mirrored bird in the background was as out of focus as possible.

Cut don't clip. When struggling to fit a bird into the frame it is often necessary to cut off part of the subject. It is far better to make a substantial cut than to clip off just a bit. Rather than clip a gull's wingtips, cut the primary feathers decisively in half. Rather than just clipping the toes of a perched heron, cut the lower leg section forcefully in half. One big plus of creating these partial body images is that they better reveal the details of a bird's plumage than a standard portrait.

The Pure Background

If there is one element that characterizes my style it is the de-focused backgrounds of pure color that I choose to work with whenever possible. Early in my career (if you choose to use the term loosely), I saw some images by Tim Fitzharris and remember being tremendously impressed. Among my favorites were the classics "Great Blue Heron with lettuce" and "White-winged Scoter pair." My immediate reaction was, "I've got to learn to create pictures like that!" Reading the fine print, I learned that Tim had used a floating blind: he was able to create these images by working at the bird's eye level. From that perspective, the foregrounds and backgrounds became soft swatches of color. Two other photographers, John Shaw and Rod Planck, both influenced me similarly, especially with their flower photography. And while for more than two decades I have yet to spend a single minute in a floating blind, I have consistently been able to create the pure backgrounds that have become the hallmark of my BIRDS AS ART style. These clean, simple, uncluttered backgrounds of diffused color help to focus the viewer's eye on my favorite subjects—beautiful birds. And—if this is your vision—you can learn to do the same. Whether you photograph birds, flowers, mammals, or tiny insects, learning to choose and utilize pure backgrounds can improve the artistic qualities of your images.

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Brown Pelican, just finished scratching... LaJolla, CA

Canon 100-400mm L IS zoom lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/2000 sec. at f/5.6 in Av mode.

The strong diagonal line of the bird's bill adds greatly to the strength of this image.

Greater Roadrunner, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/160 sec. at f/11 in Av mode. Fill Flash with Better Beamer at -2 stops.

This image is all about the ruff of feathers around the bird's neck. There were more than 25 folks photographing this unusually tame roadrunner for more than 40 minutes. When we were done, I said to the group, "Of all the images that we've made, it is likely that one will clearly be best..."

Please, however, do not feel that my style is best for you. Some folks prefer—on average—to work much wider than I do, incorporating more background and habitat in their images. I usually do so only when the background or habitat is especially attractive. Among the top professionals, Tom Mangelsen and Charlie Krebs typify the wildlife small-in-the-frame school. Whatever their choice of natural history subjects, beginning photographers should begin by creating images in a variety of styles. Over time and with practice, each will develop his or her own distinctive style. Of the hundreds of bird photography students with whom I have worked, two—Cliff Beittel early on and Greg Downing more recently—have chosen to work in a style highly reminiscent of mine, yet each has created hundreds of images distinctly different from anything that I have ever done, and each has made hundreds of images that I wish were in my files. Another student, Todd Gustafson, loves birds almost as much as I do, but is much more of a generalist than most of my top students. Todd quickly developed an incredible eye, and his photographs, whether of scenics—he is great with a panoramic camera—or of mammals or birds (or even of famous trumpets or trumpet players) are artistic delights. I am extremely proud not only of these three students, but of the many (like Joanne Williams and L. F. Van Landingham) who have gone on to become published nationally and of those who have gone on to become skilled instructors in their own right. I am, however, equally as proud of the hundreds of BIRDS AS ART students who have simply learned to improve the quality of their images.

My two favorite out-of-focus backdrops are distant green vegetation and still blue water, preferably lit by soft, early morning or late afternoon light. Many photographers believe that just the use of a super-telephoto lens at its wide-open aperture will produce these pure de-focused backgrounds, but that is definitely not the case. The primary factor in producing a soft backdrop of color is the proximity of the background to the subject. If you are photographing a warbler just an inch or two in front of a wall of willow leaves then not even a wide aperture such as f/4 or even f/2.8 will yield a pleasingly de-focused background; the leaves ***will*** be fairly sharply defined because of their proximity to the subject. If, however, you are patient and fortunate enough to capture the bird as it pauses for just an instant on a bare branch with a wall of willow leaves two feet or more ***behind*** the bird's perch, a lovely diffused background consisting of many soft shades of green will result. You can train yourself to search for such opportunities: a dragonfly sitting at the tip of a clean twig or a single blossom positioned away from others. In these and similar situations, relatively distant backdrops will help you to produce dynamic images with clean, uncluttered backgrounds.

When photographing birds in or on the water, the background will almost always look best on windless mornings or evenings. When there is a breeze, or worse yet, a stiff wind, your photographs will depict every

Great White Heron with saltwater catfish, Captiva, FL

Canon 500mm f/4L IS lens with EOS-1Ds. ISO 100. Evaluative Metering +1/3 stop: 1/1000 sec. at f/5.6 in Av mode.

Lowering the tripod just a bit here ensured a soft, Gulf-blue background.

ripple and wavelet. To my eye, these features are usually (but not always) distracting. On clear still mornings, the water may take on almost mystical qualities: a Roseate Spoonbill preening itself against a background of seamless powder-blue water at Ding Darling National Wildlife Refuge always leaves my heart racing. On calm, dreary days, try using just a bit of fill-flash to transform the flat, gray, lifeless water into a lovely backdrop reminiscent of a pool of mercury.

When working on mud flats, beaches, or grassy fields, my absolute favorite technique is to get down on the ground with a long lens. For years, I would simply take my big lens off the Wimberley head, place the foot of the lens—with the mounting plate still in place—in the sand or on the dirt and make photographs from the bird's eye level. I now use a panning ground-pod with an Arca-Swiss-style clamp seated atop a lazy-Susan-type mechanism. This allows me to pan easily with birds that are walking slowly or foraging for food. (For info on the Panning Ground Pod, or to purchase one, visit www.birdsasart.com and click on Photographic Accessories.) When working on the ground, both foreground and background elements will be rendered completely out of focus; choosing a wide aperture may heighten this effect. The resulting images will feature a razor-sharp bird framed by suffused swatches of color, and they will have a decidedly intimate quality to them. This intimacy cannot be achieved when you are making images while standing comfortably behind your tripod.

You will want to wear a shirt or sweatshirt with long sleeves and pockets, the former to protect your elbows (some photographers opt for both elbow and knee pads) and the latter so you can easily reach your teleconverters, extension tubes, or extra compact flash cards or film. Do be sure to clean the inside of your camera with a blower brush when changing film because grains of sand or grit will routinely find their way inside your camera body while you are crawling about on the ground. One of the keys to working on the ground successfully is to work hard at keeping your hands absolutely clean and free of dirt, mud, or sand. I usually get on the ground and then up again by supporting myself by my elbows… I try never to put my hands directly on the ground, but if I must, I make sure to pull my long sleeves down over my hands. If you are working on a flattened tripod, resist the urge to make it easier to

Black-bellied Plover, worn, molting adult
Jamaica Bay Wildlife Refuge, Queens, NY

Canon 500mm f/4L IS lens with 2X II TC with EOS-1D. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/11 in Av mode.

I first got down on my belly at Jay-Bay in August of 1984 in an attempt to get closer to the flighty shorebirds. Now, I try to get down and dirty whenever I am photographing birds roosting or foraging on flat ground, whether it be grassy field, mud flat, sand beach, or parking lot.

get up by pressing down on a tripod leg: there is a good chance that you will break or bend something. When using a ground pod (which I almost always do), I will, at times, place a clean hand on top of the lens barrel to help me get up.

You may find it best to advance Marine-style (making sure to keep your butt low to the ground). Folks who crawl with their butts stuck way up in the air will scare potential subjects away on a consistent basis. Another technique that works well and seems less of a threat to the birds is to crawl sideways, advancing like a crab. Getting on the ground will not only allow you to produce lovely, soft, de-focused backgrounds, but will also enable you to get closer to free and wild subjects than you had ever imagined possible. At times, you will get so close that you will need to mount an extension tube to allow for close focus! When photographing sandpipers in the mud at Jamaica Bay Wildlife Refuge's East Pond in Queens, New York, I was often able to crawl to within three feet of a sleeping young shorebird when photographing its more distant flock-mates.

For several reasons, getting low, or preferably right down on the ground, is even more important for folks whose longest lens is an intermediate telephoto than it is for those utilizing 500 or 600mm lenses with 2X teleconverters. As above, the lower you are, the easier it will be for you to get really close to most species. Equally as important is the fact that when you are standing behind your big lens and working with an effective focal length of 1000 or 1200mm (or more) your angle of declination (AOD) will be relatively shallow. The AOD is the angle between the line drawn parallel to your lens as it is pointed down towards the subject and the line drawn through the lens axis parallel to the ground. If you were hand-holding a short lens and pointing it straight down at the ground, your angle of declination would be 90 degrees. If your lens were pointed just above the horizon, the AOD would be close to zero degrees. In most cases, a shallow AOD is to be preferred to a steeper one. The greater the AOD, the more you will be pointing your camera downwards.

Imagine a totally tame pelican resting on a sand beach. If you walk up to the bird with a 100mm lens and fill three-quarters of the frame with the subject, you will be pointing your lens rather steeply downward. Your AOD would probably be somewhere in the neighborhood of 45 degrees. Now grab your 600mm lens and a 2X teleconverter. To make an image with the subject the same size in the frame you will need to back up a considerable distance, probably well more than 100 feet. In this case, your AOD will be very shallow, perhaps as shallow as 3 degrees or less. Though both images were made with you standing behind the tripod at full height, in the first image it would seem as if you were standing right over your subject and pointing the lens down while in the second photo most folks would guess that you were on the ground. Longer focal lengths inherently yield shallower AODs.

Once you learn to recognize situations that will allow you to create backgrounds of pure color, there are several things you can do to enhance this effect and to clean up your images. The first, of course, is to choose wide apertures like f/5.6, f/4, or even f/2.8 (if that is an option). When you are tempted to stop down a bit, use the depth-of-field preview feature to ensure that the background details are not brought up when you do so (remember to give your eye a few seconds to adjust to the darkened viewfinder). If you are working with California Brown Pelicans on the cliffs of La Jolla, for example—where the Pacific Ocean is hundreds of feet from your subject—you will be able to stop down a stop or two without seeing much background detail at all.

Make it a habit to check the frame edges to ensure that no sticks, leaves, or stones have crept into your carefully framed composition. At times, you can re-frame to eliminate these distractions (a camera body with a 100 percent viewfinder helps). Digital photographers need not be quite so meticulous as such items can usually be cloned out rather easily. In the same vein, learn to carefully examine your pure background for unusually light or dark sections. The viewer's eye will tend to be drawn to such areas, especially to the lighter, brighter portions of an image. It may be possible to change the position of these light or dark areas in the frame by shifting your position left, right, up, or down. You might, for example, be able to hide a bright spot behind your subject, move a dark area just out of the frame, or use a light or dark area to balance the composition, thus improving the artistic quality of each image.

Short-billed Dowitcher with sand crab, Sanibel, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop in Manual Mode: 1/400 sec. at f/11.

I was fortunate to find this bird feeding on a relatively clean section of beach. Though I was standing at full height behind my tripod, the long effective focal length of 1560mm yielded an image that looks as if it were taken from just above ground level. I gave up the sun angle here by about 30 degrees in an effort to parallel the subject to the imaging sensor. The image works well because of the soft quality of the light.

Whether you enjoy photographing bugs, birds, bears, or blossoms, be aware that the background can be just as important as the subject when it comes to the artistic and dramatic success of your images. Avoid making images in situations fraught with distracting background elements. One of the hardest lessons for nature photographers to learn is that, at times, ***not*** making an image is ***the*** best choice… By choosing your situations wisely and taking extreme care when designing your images, your backgrounds can and will add to the strength of your compositions rather than detract from them. By learning to utilize pure background techniques, you can create graphically powerful images on a consistent basis.

right: Brown Pelican, LaJolla, CA

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/640 sec. at f/5.6 in Av mode.

Most LaJolla images feature pleasing backgrounds of distant Pacific-blue. Here, working with relatively soft light in late morning, I was able to work against the dark green vegetation growing on the cliffs to the left of and somewhat behind the Cave Store Cliffs. The dark, fairly even-toned background gives this image a distinctive look.

Understanding Light-Angle, Subject-to-Film Plane Orientation, and Head-Angle

The failure to understand the importance of how light-angle and head-angle relate to both subject-to-imaging sensor or film plane orientation and to the quality of the final image ruins more bird photographs than all other artistic and design factors combined. The major flaws in at least three-quarters of the images of birds presented during BIRDS AS ART Instructional Photo-Tour critiquing sessions involve either improper light angle or improper head-angle (or both). As you approach a bird or a flock of birds, your primary consideration in nearly all cases will be light-angle, so that is where we shall begin.

Light-Angle

I am a huge (one could pretty much say “obsessed”) fan of direct frontal lighting. And surely all IPT participants would tell you that I am—among all natural history photography instructors—its biggest proponent. Except when creating silhouettes or when working in other backlit situations, I want my shadow pointed directly at the bird in almost all cases. I simply do not like side-lit images of birds—expose for the highlight side and the shadowed side loses all detail. The concept is a simple one: I want the bird in front of me with the sun coming right over the top of my head. It bears repeating: I want my shadow pointed right at the subject. In low-light situations, you do not—of course—want your shadow to fall either partially or completely on the subject. In these instances, work off-angle to the light just enough so that your shadow does not appear anywhere in the image. Ideally, connecting the dots between the light source (the sun), the photographer, and the subject will yield a straight line. With birds, and many other natural history subjects as well, utilizing direct frontal lighting will yield images of subjects that are evenly and pleasingly lit. No shadows cast by any parts of the bird will fall on the bird itself.

Realize also that when making backlit or silhouetted images, the most dramatic results will be possible when the subject is on a line drawn from the photographer to the light source: it is best to position yourself so that the subject is precisely between you and the sun.

Subject-to-Imaging Sensor or Film-Plane Orientation

The subject-to-imaging sensor or film-plane orientation is an important consideration in the basic design of all images. In many of the photos that I make, especially those of stationary birds, I strive to position myself so that the bird is roughly parallel to the imaging sensor or--as they would say in the old days, the film plane. The resulting “side” or “field guide-type” portrait reveals much of a bird’s beauty and since you are seeing exactly one-half of the bird, images of this type hide nothing. This parallel-to-the-film-plane orientation is an especially attractive choice when working in horizontal format. While photographing birds when their flight path is exactly parallel to the film plane, the nicest images almost always feature the bird with its wings in the full upstroke or the full downstroke position. If someone tells you that capturing such images is a matter of skill and they are using a digital camera, see if you can entice them to place a series of wagers with you… You will clean them out in short order. At one time, I thought that it was possible to determine wing position by timing the release of the shutter, but once I switched to digital I learned that I was badly mistaken. I would think, “Got that one with its wings up,” only to see that the image had been made while the bird’s wings were in the full downstroke position… The best way to ensure making an image that features ideal wing position is to use a camera with a fast frame rate and, once the bird enters the ideal image-making zone, to keep the shutter button depressed until the bird is past your position or until you lose focus. Images made from the side with the bird’s wings edge-on to your position pretty much never succeed: you would not want to photograph a pancake from the side!

A second option is to feature a bird that is angled towards the film plane. The bird may be angled just a bit towards you, almost facing you, or anywhere in between. These types of orientations work well with both horizontal and vertical compositions and are especially effective when the bird opens its mouth to yawn or to call—the better to look down your throat, my dear! The same can be said in instances where the subject is looking right at the camera. These types of images, especially when the bird is staring right down the barrel of the lens, can have high emotional impact. Avian subjects can—depending on the species or family—look serious, comical, threatening, irritated, puzzled, inquisitive, belligerent, or studious. Perhaps it is when birds are looking right at us that they appear most human… Either of the facing-forward orientations (angled or direct) works well with flying birds. And if the bird is angled only slightly towards your position, even the wings edge-on position can yield some pleasing compositions.

The most difficult orientation to deal with occurs when a bird is facing directly away from the film plane (and from you). When attempting to create these extremely difficult types of images, it is almost always best to work in vertical format and to maximize depth of field as much as possible, the latter because an out-of-focus tail coming right at the viewer will always be an image killer. (Note: there are two head-angle options available here. The traditional approach is to make the image when the

Common Loon with chick, Soldotna, AK

Canon 300mm f/4L IS lens (handheld) with EOS-1Ds. ISO 400. Evaluative Metering -2/3 stop: 1/80 sec. at f/4 in Av mode. Fill Flash at -1 stop with Better Beamer.

Here, the adult bird is perfectly parallel to the imaging sensor and its head is turned fractionally towards the camera. The chick's head-angle is also ideal; the tiny young loon's head is turned several degrees towards the photographer.

bird has its head turned to the side so that the head is parallel to the film plane. A less frequently used strategy here is to create the image when the subject is looking away. This may work well when there is a particularly striking pattern on the bird's back or hind neck.

Do understand that in almost all cases, subject-to-imaging sensor or film-plane orientation will be determined by wind direction. Unless it is dead calm (or close to it), or your subjects are in a sheltered area, most birds will face directly into the wind. And this holds true not only for birds in flight, but for birds resting on an open beach, for birds perched in a tree or on a wire, or for birds sitting on a clean perch at your feeding setup. It is important to understand that the very best light angle/wind direction combination for flight will usually not be best for working a group of roosting terns and skimmers.

Here are the basics:

1. Wind and sun together (i.e. from the same direction): Ideal for flight, good for birds on the ground or perched.
2. Wind and sun direction roughly 90 degrees from each other: Good to very good for flight photography, excellent for stationary subjects. These are perfect conditions for making images of birds parallel to the film plane. As a general rule, I will photograph as much as ten to fifteen degrees off of the light-angle to ensure that the subject is parallel to the film plane, but will wait until the bird turns its head back into the light before making an image
3. Wind against sun: Generally poor for all types of bird photography unless you can find subjects in sheltered or shaded areas. (Note: When the conditions seem to be poor at best, try to allow yourself to think outside of the box.)

Ring-billed Gull
winter plumage, yawning
Coronado, CA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 320. Evaluative Metering +1 stop: 1/125 sec. at f/8 in Av mode. Fill Flash with Better Beamer at -1 2/3 stops.

When trying to create tight head portraits when the bird is angled towards you, it is important to opt for some extra depth-of-field if possible as I did here. I chose an AF sensor above and to the left of the central sensor and placed it on the base of the bill.

Consider the following scenario. It is 5 a.m. on the first morning of a Southwest Florida BIRDS AS ART/Instructional Photo Tour when I meet the group in the parking lot. We are headed for one of my favorite spots on the planet, the Venice Rookery. Lots of folks, seeing a clear night sky filled with bright stars, remark that it will surely be a great morning. Noting that a cold front had passed through during the night and feeling a chilly northwest wind on my cheek, I inform them that despite the bright sunny conditions that we will encounter, we will have a difficult morning that will offer very little in the way of good flight photography. “How can you possibly know that?” several ask almost in unison. “It’s easy,” I respond. “The sun rises in the east. With the wind from the northwest the birds will be flying and landing into the wind and away from both our position and the light. Things will be better this afternoon at our White Pelican spot as the wind is likely to shift to the west. With the sun setting in the south/southwest, the huge, white birds will be flying, landing, and even standing facing into the wind and into the light.”

For flight photography, winds from the south or those with an easterly component in the morning are ideal. In such conditions, the birds will be flying and landing into the wind and the sun will be behind you (with your shadow pointed almost directly at your incoming subjects). Likewise, winds from the south or those with a westerly component will yield excellent conditions for flight photography on sunny afternoons. Strong southeast winds in morning or strong southwest winds in the afternoon are perfect for those wishing to make images of birds braking in flight while coming in with their landing gear down.

Brown Pelican preening uropygial gland, La Jolla, CA

Canon 500mm f/4L IS lens with EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/500 sec. at f/11.

With the bird facing dead away from you, it is generally best to wait until the bird turns its head back to you and to choose an aperture between f/11 and f/22.

Glaucous-winged Gull, Katmai National Park, AK (via Chuck Keim's bear boat)

Canon 300mm f/4L IS lens (handheld) with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop (for the soft, early morning light): 1/3200 sec. at f/4.

With the wind and sun from almost the same direction, we enjoyed a fabulous morning of flight photography at the gull colony.

Northwest winds in the morning and northeast winds in the afternoons are generally the kiss of death for flight photography, but never give up. Try thinking outside of the box while letting your creative vision expand when conditions appear to be bleak. Here are some of the ways that I have come up with to save the day when the wind-against-sun combination made things difficult:

1. Utilize direct backlighting to photograph birds landing or in flight. Light shining through the wings of a Snow or Ross' Goose or any of the egrets or terns can be a beautiful thing. Add flash if needed (but remember to be careful when pointing your Better Beamer anywhere near the sun lest you melt a big hole in your flash…)
2. Look for diving groups of Brown Pelicans. While the pelicans will make their approaches into the wind (and thus, away from the light), just before they dive they turn, so that when they are in full dive the sun lights their backs directly. I actually prefer these top-shots of diving birds to the images that show the birds' undersides.
3. If the wind is not quite opposite the sun, you may be able to capture a nice over-the-shoulder pose or to make some nice images of banking birds.

Bald Eagle, Homer Spit, AK

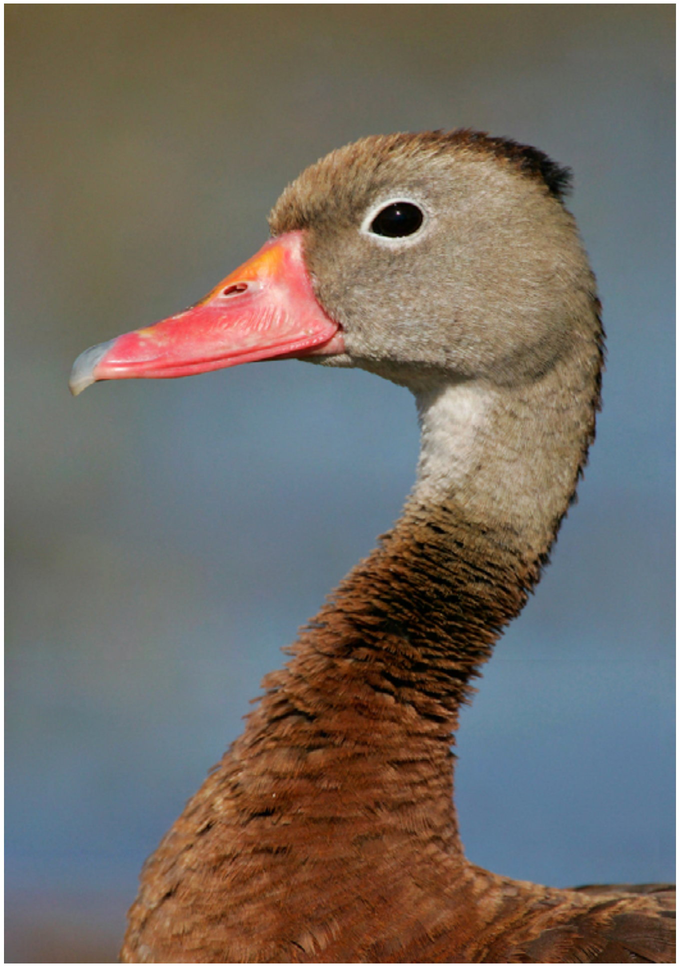
Canon 70-200mm f/2.8L IS lens (handheld at 200mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +2 1/3 stops off of the sky set manually after checking the histogram: 1/500 sec. at f/7.1. Fill Flash at -2 stops.

In heavy overcast conditions, the light is omnidirectional rendering wind direction a non-factor.

Head-Angle

Understanding the importance of the angle of the bird's head relative to both the light-angle and the imaging sensor or film plane are critical considerations if one wishes to create powerful, appealing images on a consistent basis. Images of birds facing slightly or well away from the camera are rarely successful. Ideally, when the subject is roughly parallel to the film plane, the bird's head should be parallel to the film plane, or—better yet in most cases—just a bit inside of parallel, that is, turned two or three degrees towards the imaging sensor or the film plane. Assuming a perfect light-angle, I actually prefer the latter for several reasons. With the subject's head turned slightly ***towards*** the film plane, the tip of the bill will generally be on the same plane as the eye, so even when you are working at wide open apertures the image will appear sharper overall than an image in which the bird's head is precisely parallel to the film plane. Furthermore, when the bird's head is cocked slightly towards you and the sun is directly behind you, the face will be illuminated immaculately and the image will almost always feature a catch-light in the eye.

With birds facing to some degree towards the camera, it is usually best to make the photograph either when the bird is looking directly at the camera or when its head is aligned naturally with its body. When a bird's head is parallel to the film plane and its body is angled towards the film plane the results usually look at least a bit unnatural. When the body is angled partially or totally away from the film plane, it is—as noted above—almost imperative that the bird's head be parallel to the film plane. At times, it is possible to get a bird to turn its head towards you by making a sharp raspy "queek" sound (though this may scare the subject away). Often it's best to simply wait (and pray) for the bird to turn its head, as birds as a rule are constantly looking around to check for predators.



Black-bellied Whistling Duck, Vierra Wetlands Melbourne, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1250 sec. at f/8 in Av mode.

When I made this image my shadow was pointed directly at the subject. The bird's head was a few degrees on my side of parallel, just as I prefer. I was seated on a side hill and made sure to lengthen the tripod's downhill leg as I set up.

Composition and

Image Design

Gallery

Sandhill Cranes in snowy cornfield, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (handheld at 220mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +2 stops: 1/1250 sec. at f/5.

In this classic rule-of thirds horizontal composition, the snow-covered corn stalks provide a striking and intricately patterned background. To learn the basics of composition and image design, see Chapter Seven in my book, The Art of Bird Photography: The Complete Guide to Professional Field Techniques.

Sandhill Crane with ear of corn
Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with EOS-1D. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/4 set manually.

As long as the bird is fairly large in the frame, most vertical images work well with the subject centered from side-to-side in the frame. In thirteen years of extensive Bosque visits, I have seen a crane holding a corn cob fewer than a handful of times.

facing page:
Black Skimmer begging
Fort DeSoto Park
Tierra Verde, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 400. Evaluative Metering +1/3 stop: 1/800 sec. at f/8 in Av mode.

Even though I made sure to include the three little burrows, I put the bird well back in the frame. Note that there is about twice as much room from the bill tip to the frame edge as there is from the tail tip to the frame edge.

Red-winged Blackbird sky-pointing
Point Pelee National Park, Ontario, Canada

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1 stop (in soft light): 1/320 sec. at f/10 in Av mode

In some cases, depending on a bird's posture, you may wish to move large-in-the-frame subjects back in the frame. Sky-pointing is one of many courtship behaviors designed to attract a mate.

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -2/3 stops (for dark background): 1/3200 sec. at f/5.6 set manually.

African White Pelican
Lake Nakuru, Kenya (all)

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/500 sec. at f/5.6 set manually.

I carefully adjusted the height of the tripod so that the bird's head and bill were juxtaposed against the wide strip of brown. After that, it was just a matter of waiting for the bird to give up a good head-angle. When making over-the-shoulder portraits it is important to use a small enough aperture to ensure sharpness from the tail to the bill tip. Because of the large camera to subject distance here, the wide open aperture provided enough depth of field to cover the bird from tail to bill tip.

When using the central sensor for flight photography and placing the sensor on the bird’s head, face, neck, or eye as recommended, the subject is often too centered as in the original image (above left on facing page). With a quality digital camera and lots of megapixels, I will often crop the image to put the bird farther back in the frame (as above). I up-size the image using Bicubic Smoother. I much prefer the cropped version to the original.

When designing images like this, placing the bird well back in the frame is usually the way to go. You can focus on the eye using either One-Shot AF or Manual focus, or, as I did here, use AI Servo AF and place the Central Sensor (the only sensor that is active with an f/4L lens and a 2X TC) on the bird's breast. Depending on the size of the bird in the frame, you might wish to place the sensor on the bird's upper back, face or eye.

right: Little Bee-eater
Lake Baringo, Kenya

Canon 600mm f/4L lens with 1.4X TC, 25mm extension tube, and EOS-1v. Fuji Velvia pushed one stop to EI 100. Evaluative Metering at zero: 1/180 sec. at f/6.7 in Av Mode.

This image features a standard vertical composition with a bit of extra space at the top to allow room for a magazine title. The pure green background is one of my very favorites. The key factor in creating these lovely backdrops is the distance from the perch to the background vegetation: the greater the distance, the softer the background. Note also the careful inclusion of the two thorns on the left.

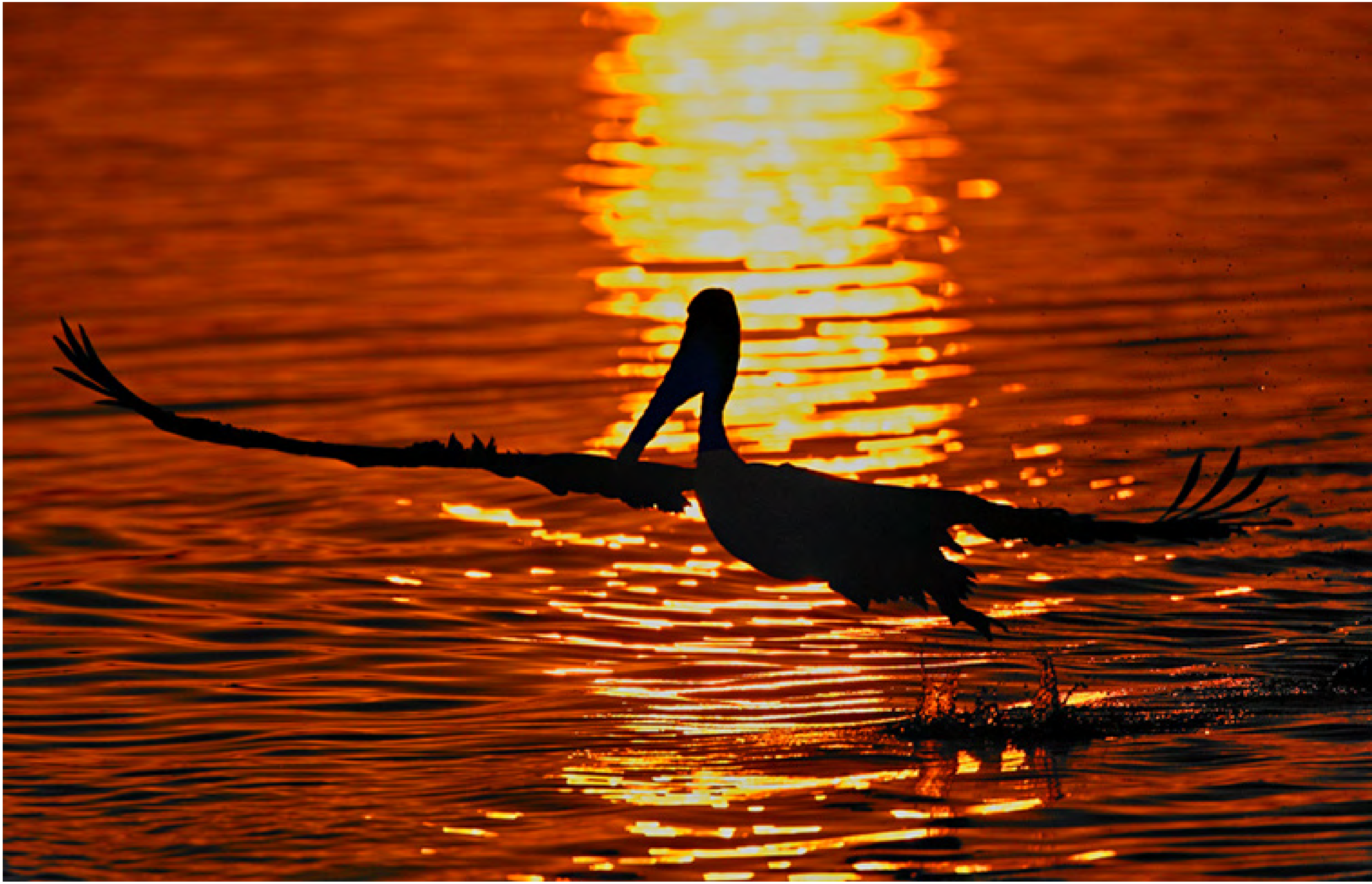
facing page: African Firefinch, male
Kirirumu Tented Camp, Lake Manyara, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D. ISO 400. Evaluative Metering at zero: 1/160 sec. at f/8 in Av mode.

Double-crested Cormorant, Santee Lakes, CA

Canon 600mm f/4L IS lens with 1.4X TC and EOS-1v. Fuji Provia F100 pushed one stop to EI 200. Evaluative Metering +1 stop: 1/250 sec. at f/5.6

I made the image above, with the subject centered, as an example of a boring composition. After properly placing the small-in-the-frame bird in the upper right corner, I was rewarded with a wing-flap. But even had the cormorant not flapped, the composition on the left would have been far more dramatic.



Brown Pelican taking flight at sunrise, Bolsa Chica Lagoon, Huntington Beach, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/5000 sec. at f/5.6 in Av mode.

At times, simply managing to fit the whole bird in the frame can yield the best composition. The converted Raw file was well underexposed; a simple Shadow/Highlight adjustment provided dramatic improvement. Digital allows daring photographers to attempt the impossible with impunity.

Semipalmated Sandpiper with chick, Nome, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/60 sec. at f/10 in Av mode.

The adult bird was standing in a small clearing in the flowers. The chicks were running around. I waited, and for an instant everything was perfect!

Barred Owl, Lake Martin, LA

Canon 500mm f/4L IS lens with EOS 20 D. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/4 in Av mode.

Much of my work features birds set against clean backgrounds of pure color. When I encounter a bird in beautiful surroundings, however, I will often work wider than I usually do and produce what some might call an environmental portrait. Here, the patterns of the bark and the vines are as beautiful and interesting as the bird. To include both of the tree trunks I opted to "break" the compositional rules and have the bird facing out of the frame.

right:
Boat-tailed Grackles & European Starlings in skeleton tree at sunset, Vierra Wetlands, Melbourne, FL.

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/800 sec at f/5.6 in Av mode.

I set up this rather musical arrangement as the sky color intensified, making sure to include the vegetation in the lower right corner. The birds singing and displaying at the top of the tree were the icing on the cake, making this one the lone keeper in a long series.

left and above:
Bald Eagle with ice on bill tip, Homer Spit, AK

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop set manually: 1/4000 sec. at f/4 in Av mode.

It would be hard to imagine a more luscious background. The light in Homer is lovely all day long and spectacular in the late, late afternoon. I made this image from the car off of a large bean-bag with the distant bay as the backdrop. The uncropped original (above) features the bird well back in the 3X2 frame, leaving lots of room for an editor's type.

Tricolored Heron, striking blur, Fort DeSoto Park, Tierra Verde, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D on panning ground pod. ISO 250. Evaluative Metering at zero: 1/250 sec. at f/8 in Av mode.

One long, tall bird. Three images. Three different formats, each determined by the bird's posture. In the image above, made at 1/250 second, there was a pleasing blur to the head and bill, just enough to give a feeling of motion. The eye-level perspective yielded a lovely background.

above: Tricolored Heron
fresh juvenal plumage, ruffling, Lake Marian, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250.
Evaluative Metering +1/3 stop: 1/800 sec. at f/4 in Av mode.

I have no commitment at all to the 3X2 ratio inherent to both film and digital capture. I will crop to any proportions so long as the result is pleasing. This young bird fit precisely into a square frame.

right: Tricolored Heron, fledged juvenile
St. Augustine Alligator Farm, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400.
Evaluative Metering at zero: 1/250 sec. at f/5.6 in Av mode.

Vertical images that feature the subject looking straight down the barrel of the lens are often quite appealing.

right:
Sandhill Cranes in pink-purple-blue sky at dusk
Bosque Del Apache NWR, San Antonio, NM

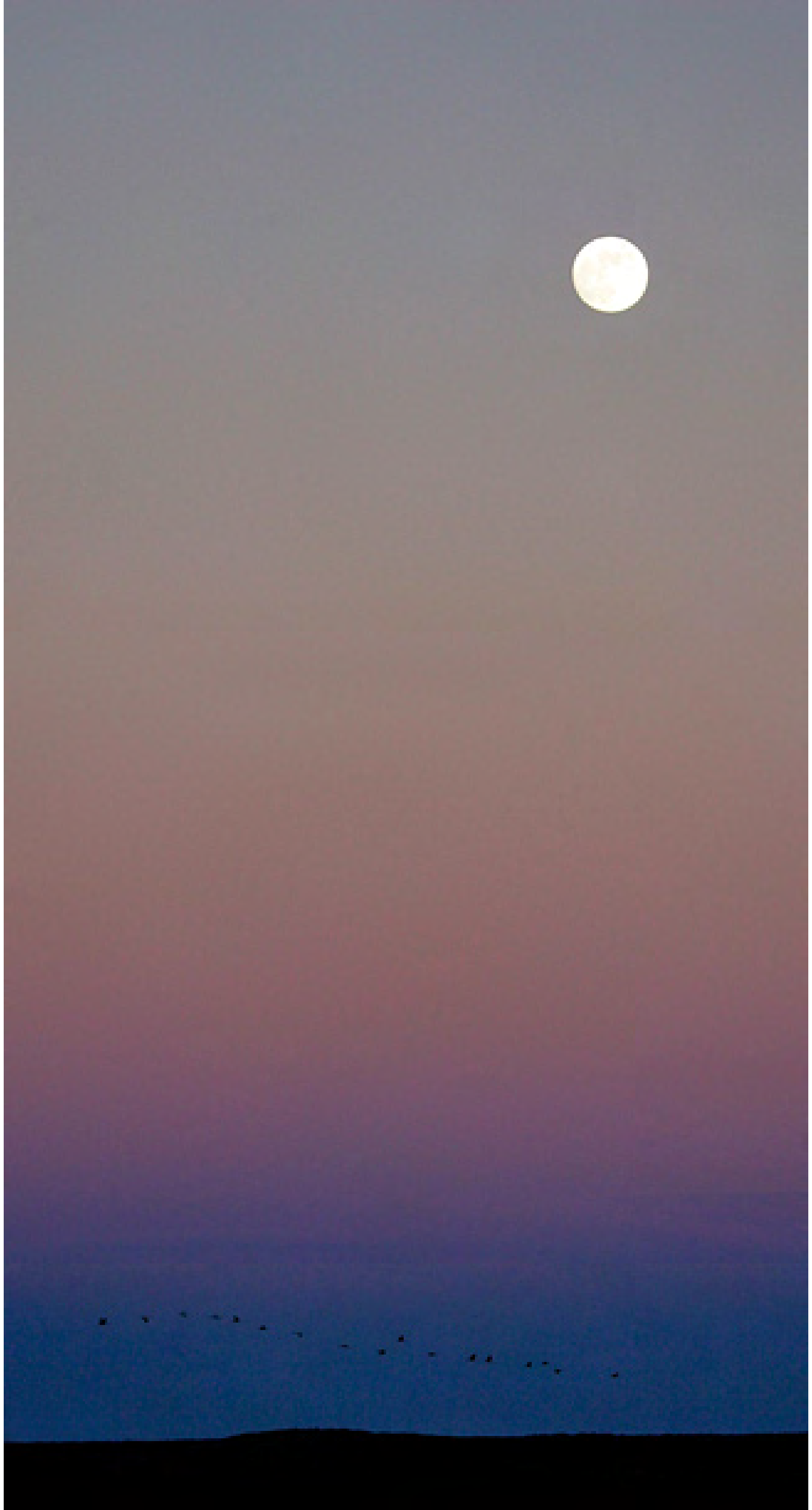
Canon 100-400mm L IS zoom lens (handheld at 150mm) with EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/400 sec. at f/5.6 in Av mode.

I had visualized this image for many years before I created it. During my 2004 visit all of the elements fell into place: the full moon, the clear evening, the resulting pink-purple-blue sky, a clean horizon line, and a string of cranes heading to roost. To my mind, the elegance of this image stems from its simplicity.

facing page:
Snow Geese blast off, Bosque Del Apache NWR, San Antonio, NM

Canon 100-400mm L IS zoom lens (handheld at 150mm) with EOS-1D Mark II. ISO 50. Eval. Met. at zero: 1/25 sec. at f/29 in Tv mode.

When designing bird-scapes, it is important to strive for a clean lower edge, here, the strip of dry earth and grasses. This image also features a clean upper edge. Mid-range intermediate telephoto lenses are my favorite blast-off lenses as they give you many framing options. Note here that it was necessary to choose ISO 50 to achieve the slow shutter speed that I wanted. Note also that by working in Tv mode you can maintain absolute control of the shutter speed.



Mew Gull in breeding plumage
Potter Marsh, Anchorage, AK

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 160. Evaluative Metering +2/3 stop: 1/250 sec. at f/13 in Program mode. Fill Flash with Better Beamer at -2 stops.

Sandhill Crane
South Venice, FL

Canon 400mm f/5.6L lens (handheld) with EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/3200 at f/5.6.

left:
Brown Pelican, fourteen-day-old chick in nest, Tierra Verde, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 2/3 stops: 1/125 sec. at f/8 in Manual Mode. Fill Flash with Better Beamer at -1 stop.

When creating tight head portraits, the biggest challenge involves making an image in which the bird's eye is placed well above the horizontal centerline. This is especially true with folks using modern autofocus technology as photographers tend to rely too heavily on the central sensor. They simply place it on the subject's eye and make the image. As a result, the eye is in the center of the frame and there is too much empty space above the bird's head. There are several ways to avoid this pitfall: you could use One-Shot AF, focus on the bird's eye, and recompose; you could use CF-4-3 and do the same; you could work in AI Servo AF and utilize the full array of sensors, or if limited to the central sensor, you could try placing the sensor somewhere on the bird's neck while choosing a small aperture; or you could focus manually. In all cases, do attempt to create a balanced composition that uses a good portion of the frame and is pleasing to the eye.

right:
Great Egret backlit
St. Augustine Alligator Farm, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/250 sec. at f/14 in Manual Mode. Fill Flash with Better Beamer at -1 stop.

The ideal situation exists when your shadow points directly at the subject and the bird is perfectly parallel to the film plane or the imaging sensor. Here, I set the exposure manually so that the meter would not be fooled by the brilliant white of a breaking wave or the dark shadow of a wave face. The soft golden light, the ground-level perspective, and the Atlantic-blue background make this one of my very favorite images.

right:
Great Egret chicks in the nest
Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/100 sec. at f/8 in Av mode. Fill Flash at -1 stop with Better Beamer.

When photographing two or more birds getting a good head angle for each subject can be a huge challenge. In such situations, it often pays to make a series of images in quick succession in hopes of succeeding. Attempting to glance from one bird to the other works well on occasion...

facing page:
Sanderling sleeping, first winter plumage
Stone Harbor Point, NJ

Canon 600mm f/4L IS lens with 1.4X TC and EOS-1v on Panning Ground pod. Fuji Velvia pushed one stop to EI 100. Evaluative Metering at zero: 1/640 sec. at f/5.6 set manually.

left:
Osprey, hunkered down in the wind
Indian Lake Estates, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/80 sec. at f/8 in Av mode.

When the bird looked to his left, I shifted the lens to my right to give him room to see into the frame. I love the soft light

right:
Lesser Scaup, Coronado, CA

Canon 600mm f/4L IS lens with EOS-1v. Fuji Provia F-100 pushed one stop to EI 100. Evaluative Metering +2/3 stop: 1/640 sec. at f/5.6 in Av mode.

On the way back to the car after photographing scaups in Glorietta Bay, I noticed the watery reflections of some brightly colored kayaks that were piled up on a small dock. We tossed some whole corn into the channel and wound up with many great opportunities to utilize the unique, ever-changing background.

left:
American Crow on fence post
Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/500 sec. at f/8.

By reducing an image to the barest compositional elements, it is possible to make even an ordinary bird like a crow look good. The background here is a blend of grass and reddish earth.

right:
American Wigeon
genetic morph drake
Socorro, NM

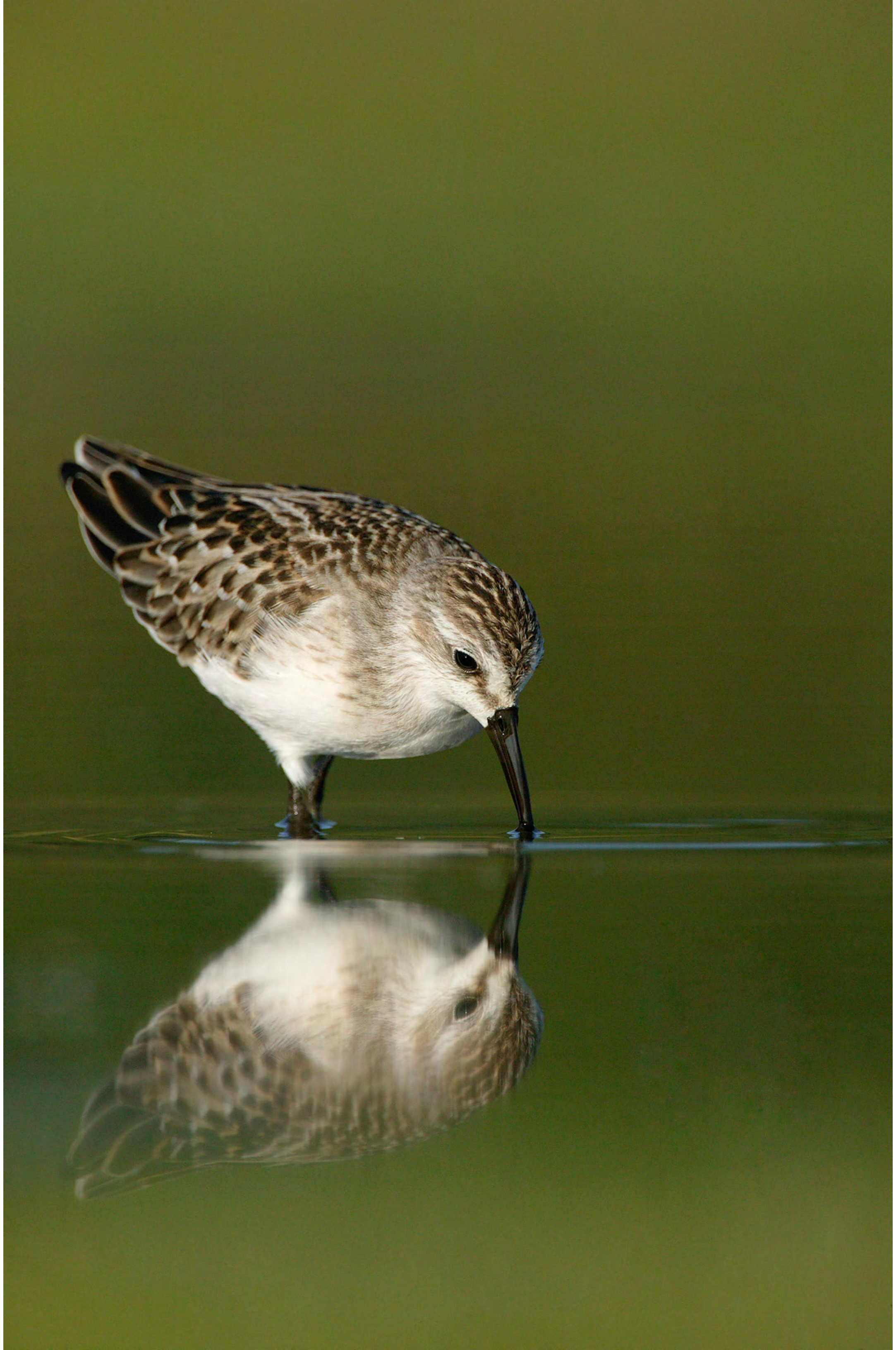
Canon 400mm f/5.6L lens with 1.4X II TC and EOS-1D Mark IIN. ISO 400. Evaluative Metering -2/3 stop: 1/1600 sec. at f/8 set manually.

With the wigeons responding to whole corn, all that it took to create this image was a good imagination and good technique. First, I checked the exposure via the histogram and then concentrated on getting the central sensor on the bird's face just below the eye. I tried to push the shutter button only when the angle of the bird's head to both the light and the plane of the imaging sensor was perfect.

both: Glaucous-winged Gull, winter plumage adult in flight, Homer, AK

above: Canon 70-200mm f/2.8L IS lens with EOS-1D Mark II. ISO 800. Evaluative Metering +1 1/3 stops: 1/500 sec. at f/8.
facing page: Canon 300mm f/2.8L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop in Manual Mode: 1/1000 sec. at f/8.

The image above works because of the lovely pink-sky background—I waited for the bird to fly through the one small patch of intense color. The image on the facing page works because of the soft light and the ideal pose. Having the eye sharp is just one of the many factors that go into the success of a flight photograph; in these two images we see that background, light, and wing position are also vitally important.



left:
Semipalmated Sandpiper
foraging juvenile
Jamaica Bay Wildlife Refuge, Queens, NY

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering -2/3 stop: 1/500 sec. at f/11.

Because of its simplicity, this is my very favorite JBWR digital image. Putting the bird back a bit in the frame is often a good strategy with vertical compositions.

right:
Piping Plover
Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/11.

I was working this rather tame bird for almost an hour as the light got nicer and nicer. I saw that he was approaching a tiny bit of grass with his patented step-step-stop plover walk. When he stopped for an instant in the perfect position I was ready. As it turned out I lost—due to human error—both the raw and the optimized files not only for this image, but for about thirty other family-jewel type images that I created in May 2004. All that remain are book-sized J-PEGS. Be careful out there.

Cattle Egret pair in breeding plumage, St. Augustine Alligator Farm, St. Augustine, FL

Canon 300mm f/4L IS lens (handheld) with EOS 10D. ISO 400. Evaluative Metering -1/3 stop: 1/200 sec. at f/7.1 in Program mode with pop-up flash.

To create a juxtaposed composition, adjust your perspective so that the background subject pleasingly mirrors the main subject.

Coastal Brown Bears, mom and cub clamming, Katmai National Park, AK

Canon 500mm f/4L IS lens (on the ground) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/4.

When creating these juxtaposition images, I almost always prefer my background subject out-of-focus and offset to the front of the main subject.

Sandhill Crane above mountain, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop off the yellow grasses below: 1/1000 sec. at f/6.3.

When photographing at the crane pools in early morning, it pays—as I did here—to include a strip of mountain at the bottom of the frame.

Sandhill Crane flock and centered full moon, Bosque Del Apache NWR, NM

Canon 100-400mm L IS zoom lens at 135mm, rested on base of locked-down, tripod-mounted super-telephoto lens for stability, with EOS-1D Mark II. ISO 1600. Evaluative Metering +2/3 stop: 1/800 sec. at f/5.6.

I would never advise anyone to put the full moon in the center of a horizontal composition, but with a flock of birds on each side of the moon, there was no better place to put it. In this case, centered symmetry worked. It just shows to go you that there are no hard and fast rules, only guidelines.

left:
Sandhill Crane before sunset
Harry's Crane Pool
Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark IIN. ISO 100. Evaluative Metering -4 stops set manually: 1/8000 sec. at f/51.

To set an exposure four stops darker than the metered exposure, first take a meter reading at -3 stops and then set the exposure manually one full stop darker than that. Notice that I had to drop down to ISO 100 to accomplish that. I needed to be in one spot and one spot only to place the bird exactly where I wanted it in the swath of golden water.

facing page:
Sandhill Cranes after sunset
Harry's Crane Pool
Bosque Del Apache NWR, NM

Canon 100-400mm L IS zoom lens at 105mm rested on base of locked-down, tripod-mounted super-telephoto lens for stability, with EOS-1D Mark IIN. ISO 800. Evaluative Metering -1/3 stop set manually: 1/60 sec. at f/6.3. Flash at -1 stop.

Following basic compositional guidelines, I designed this image with roughly 1/3 sky, 1/3 mountain, and 1/3 birds and foreground. Zooming out to 100mm would have let me include a bit more sky...

Snow Geese, “Only Three,” Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering off the sky -1/3 stop: 1/1600 at f/11 set manually.

The creation of an image like this with all three birds sharp on the eye is largely serendipitous. I held the shutter button down for rapid fire once the birds entered the optimal zone, the small area in their flight path where subject size in the frame and light angle were both near-perfect.

Snow Geese and pink sky, Bosque Del Apache NWR, San Antonio, NM

Canon 70-200mm f/2.8 IS L lens (handheld at 135mm) with EOS-1Ds Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/50 sec. at f/5.6.

Here I placed the horizon line about 1/5 of the way up in the frame to maximize the impact of the lovely pink sky.

Snow Geese at dawn, fish-eye, Bosque Del Apache NWR, San Antonio, NM

Canon 15mm fish-eye lens with EOS-1D Mark IIN. ISO 800. Evaluative Metering +1 1/3 stops: 1/80 sec. at f/2.8.

Even when using a fish-eye lens, the standard 1/3-2/3 proportion of foreground to sky works well. The crescent moon is a pleasing accent.

Snow Geese and red-slash cloud, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/500 sec. at f/5.6.

Here again I used the 1/3-2/3 proportion to create a pleasing composition, this time using the cloud to divide the frame.

Pacific Golden-Plover, male on nest, Nome, AK

Canon 600mm f/4L IS lens with EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/6400 sec. at f/4.

I wanted to work wide open here to throw the foreground tundra colors and patterns completely out of focus. If anything, I should have pointed the lens down and to the right a bit more to move the bird even farther into the upper left corner of the image.

Marbled Godwits, juxtaposed, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/200 sec. at f/11.

When I saw these two birds perfectly positioned for a juxtaposition image, I tried at first to frame it as a vertical but that did not work; I could not fit the long bills into the frame. In horizontal format, I tried to include all of the rear bird’s head but could not accomplish that either, so I made the image that appears here. In any case, I like it! And so did Corbis.

Oribi, female, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/640 sec. at f/8.

This is a good example of cutting not clipping. Note that I chose to ***cut*** *the lower fore-legs in half rather than point the camera down a bit and wind up clipping the hooves. Our images of this species convinced the lodge naturalists that this species does indeed visit the park at least on occasion.*

Impalas juxtaposed, Samburu, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering +2/3 stop: 1/640 sec. at f/4.

This is my all-time favorite juxtaposition image. I was making front-end vertical portraits of the antelope in the foreground when I saw the animal in the background. I was lucky to be in One-Shot AF as that allowed me to simply recompose and fire. As with most juxtaposition situations, this arrangement lasted about three seconds... Note: good photographers keep their eyes moving even when they have a great subject right in front of them.

left:
Thompson's Gazelle
Maasai Mara, Kenya

both: Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/125 sec. at f/4.

The photographs on the facing page were made just seconds apart. Vertical images that feature the animal staring down the barrel of the lens are usually extremely powerful, but for whatever reason, everyone that I've shown these images to feels that the larger image (far left) is the more powerful. I agree. This is another case where the guidelines fail us...

Grant's Gazelle, Ngorongoro Crater, Tanzania

Canon 100-400mm L IS zoom lens with EOS-1D. ISO 250. Evaluative Metering -3 stops: 1/16000 sec. at f/10.

For the image above, made at about 8 a.m., I had the driver position the van so that we could hide the sun directly behind the antelope's body. Setting the exposure at -3 stops resulted in my severely underexposing the hippo family image featured in the digital chapter.

left:
Acacia tree & vultures
Nubian Vulture taking flight
Maasai Mara, Kenya

Canon 28-135mm IS zoom lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/11.

Having a short zoom lens at hand was instrumental in capturing the peak of action here. I loved the tree on the plains; the bird taking flight was icing on the cake.

right:
White-backed Vulture landing
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/500 sec. at f/9.

With the bird coming right at me and braking hard, a square format works perfectly here.

Lesser Black-backed Gull, adult, Little Estero Lagoon, Fort Myers Beach, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/160 sec. at f/5.6.

When making horizontal images with the bird filling about half the frame, be sure to place the subject well back in the frame as I have done here.

Laughing Gull with fish, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/500 sec. at f/8.

Here I chose to include all of the near-perfect reflection. The fish had been regurgitated by this bird's mate.

Bald Eagles, two adults and an immature (white-belly one), Homer, AK

Canon 400mm f/5.6L lens handheld with EOS 20D. ISO 200. Evaluative Metering +1/3 stop: 1/1600 sec. at f/5.6.

Compositions with three subjects can be quite tricky. You almost always want to look for compositional balance and avoid merges while at the same time trying to come up with three acceptable head-angles. The calling bird on our left here is a huge plus.

As you view the two dozen eagle photographs on these pages and the twelve pages that follow (as well as the other eagle images from Homer that are scattered throughout the book), consider that they were all taken in a single ten-day period with only five different lenses. Each image is, however, distinctly different from the others. Some of the images show only a part of a single bird, some show the whole bird, and in others the subjects are tiny in the frame. There are images of single birds and images of groups of birds. When photographing groups it is important to consider the spatial relationships between the birds as well as the head-angles. The quality of the light varies from the lovely pinks of predawn, to the colder bright sunlight encountered during midday hours, to the rich, warm light of late afternoon. Though many of the birds are in flight, no two flight photographs are at all alike. In some images I am pointing the camera up, and in some I am pointing the camera down.

On many of my Florida IPTs, I have heard comments such as, "But we already photographed Great Blue Heron." I have thousands of great blue images, even a few good ones. And many have sold and sold and sold. But still I cannot wait until my next chance to photograph a Great Blue Heron (or a Bald Eagle). The types of images that you can create are limited only by your creative vision and your work ethic.

Bald Eagle in flight (top-shot), Homer, AK

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/3200 at f/4.

With temperatures below zero, strong winds in our face, and the sun behind us, the vertical bank shot was the way to go; the wind determined the very best composition. For me, the narrow strip of white across the top is a plus. Others may prefer to crop that out. Often there is no clear cut right or wrong...

left: Bald Eagle, immature, Homer, AK

Canon 70-200mm f/2.8 lens (handheld at 155mm) with EOS-1D Mark II. ISO 800. Evaluative Metering +1 1/3 stops: 1/50 sec. at f/11.

I moved right so that the moon and the bird would balance the composition. I used f/11 to sharpen the moon a bit and rested the lens on a fence for extra sharpness.

below: Bald Eagles on ice floe, Homer, AK

Canon 70-200mm f/2.8 lens (handheld at 200mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stops: 1/800 sec. at f/2.8 in Manual Mode.

Though both Greg Downing and I alerted the group to the possibility of this image, he and I were the only two to try for it. Knowing that bird behaviors are often repeated can help you create some interesting compositions.

left:
Bald Eagle on ice floe, Homer, AK

Canon 70-200mm f/2.8 lens (handheld at 123mm) with EOS 20D. Evaluative Metering +1/3 stop: 1/500 sec. at f/2.8.

This image is all about the color of the water. I noticed that with ice floating just below the surface, the water appeared a beautiful turquoise green.

right:
Bald Eagles and tanker, Homer, AK

Canon 70-200mm f/2.8L IS lens (handheld at 105mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/160 sec. at f/9.

*Note the perfect compositional balance here with the pilings and the ship in opposite corners of the image. You change the juxtaposition of compositional elements by changing **your** position, moving left or right, up or down.*

above: Bald Eagle, juvenile, Homer, AK

Canon 300mm f/2.8L IS lens (handheld) with EOS-1D Mark II. Evaluative Metering +2/3 stop: 1/800 sec. at f/7.1 in Manual Mode.

The spread wings and the cocked head make this one unique.

right:
Bald Eagle, immature striking fish, Homer, AK

Canon 70-200mm f/2.8 lens (handheld at 200mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3: 1/1250 sec. at f/5.

Most folks made eight to ten images each time an eagle swooped in. I preferred to make only one or two images on each pass when the bird was "in the optimal zone," fairly large in the frame when the action was peaking.

above: Bald Eagle, breast of juvenile
Homer, AK

Canon 400mm f/5.6L lens with EOS 20D. ISO 200. Evaluative Metering +1/3 stop: 1/1600 sec. at f/8 in Manual Mode.

right:
Bald Eagle, talons of immature, Homer, AK

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Flash as main light at zero with Better Beamer: 1/60 sec. at f/16 in Manual Mode was one stop below the Evaluative Metering reading.

With tame subjects, I often strive to create tight close-ups that reveal intricate pattern and detail. In the talon image I focused on the base of the forward-most talon to take advantage of the fact that there is twice as much depth of field ***behind*** *the point of focus as there is in* ***front*** *of it.*

Bald Eagle, juvenile with wings raised, Homer, AK

Canon 400mm f/5.6L IS lens (hand-held) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero set manually: 1/1600 sec. at f/8.

This is a square crop from a horizontal original. Many folks think that cutting off part of the subject is a big no-no. I do it all the time, but I do try to cut rather than clip. A neat pose often lasts only for an instant or two, so strive to make the best image possible in a given circumstance regardless of focal length or your position. Had I attempted to move back before making this image I would have missed the action.

Bald Eagle, adult beginning dive, Homer, AK

Canon 300mm f/2.8L IS lens (handheld) with EOS-1D Mark II. ISO 400. Evaluative Metering off the white sky +1 2/3 stops set manually: 1/1000 sec. at f/6.3 in Manual Mode.

Here is another example of the principle stated on the facing page. This is a bit of a crop from a wider original. Tight cropping of photographs like this can result in powerful images. Be sure to take care as to exactly ***where*** *you cut the various feather tracts.*

Bald Eagle, predawn silhouette, Homer, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/3200 sec. at f/11

Placing the subject in the "V" formed by the two mountains resulted in a far more interesting composition than had I simply silhouetted the bird against the bright white sky. 45-point AFPS is of great help when you are trying to place the subject off-center.

Bald Eagle, sub-adult looking down, Homer, AK

Canon 70-200mm f/2.8L IS lens (handheld at 185mm) and EOS-1D Mark II. ISO 250. Evaluative Metering +1 stop set manually: 1/500 sec. at f/4.5.

At times you can—as I did here—create diagonals by turning the camera; sometimes you need to do so in order to fit the whole bird into the frame.

left: Bald Eagle, juvenile with ice on bill tip
Homer, AK

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/60 sec. at f/11.

With the bird facing to my right, I made sure to place the subject on the left side of the frame to give the young eagle a chance to see into his world. To do so I used One-Shot AF with the central sensor (out of necessity) and then recomposed. Placing the subject in the center of the frame would have yielded a static composition.

right:
Bald Eagle, close-up of adult plumage
Homer, AK

Canon 600mm f/4L IS lens with 1.4X II TC, 25mm extension tube, and EOS-1D Mark II. ISO 400. Evaluative Metering at zero set manually: 1/200 sec. at f/16.

When you have the chance to get unusually close to a good subject, zeroing in on the plumage or other details can result in interesting pattern-type images.

Bald Eagle in flight with upturned wingtips, Homer, AK

Canon 300mm f/4L IS lens (handheld) with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1600 sec. at f/5.6.

When photographing birds in flight, the pose is where it's at. In this image the top or dorsal view with the upturned wingtips creates an image that is both powerful and unique.

left: Bald Eagle, silhouette, Homer, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -2 stops: 1/1000 sec. at f/18.

Only by getting low was I able to juxtapose the eagle against the patch of bright background. It is possible to create dramatic silhouettes at almost any hour of the day if you keep your mind and eyes open. This image was made more than three hours before sunset.

right: Bald Eagle, wheeling downward, Homer, AK

Canon 70-200mm f/2.8L IS lens (handheld at 200mm) with EOS-1D Mark II. ISO 500. Evaluative Metering + 2 1/3 stops off the white sky reading: 1/800 sec. at f/2.8.

I was unable to zoom wider when this eagle began its dive, so I clipped off a good portion of its left wing. By following the cut don't clip rule I cropped that wing just past the alula, the small protruding feather on the upper edge of the wing. The resulting composition emphasized the fact that this was a bird that was ***rapidly heading down.***

Bald Eagle, head portrait, Homer, AK

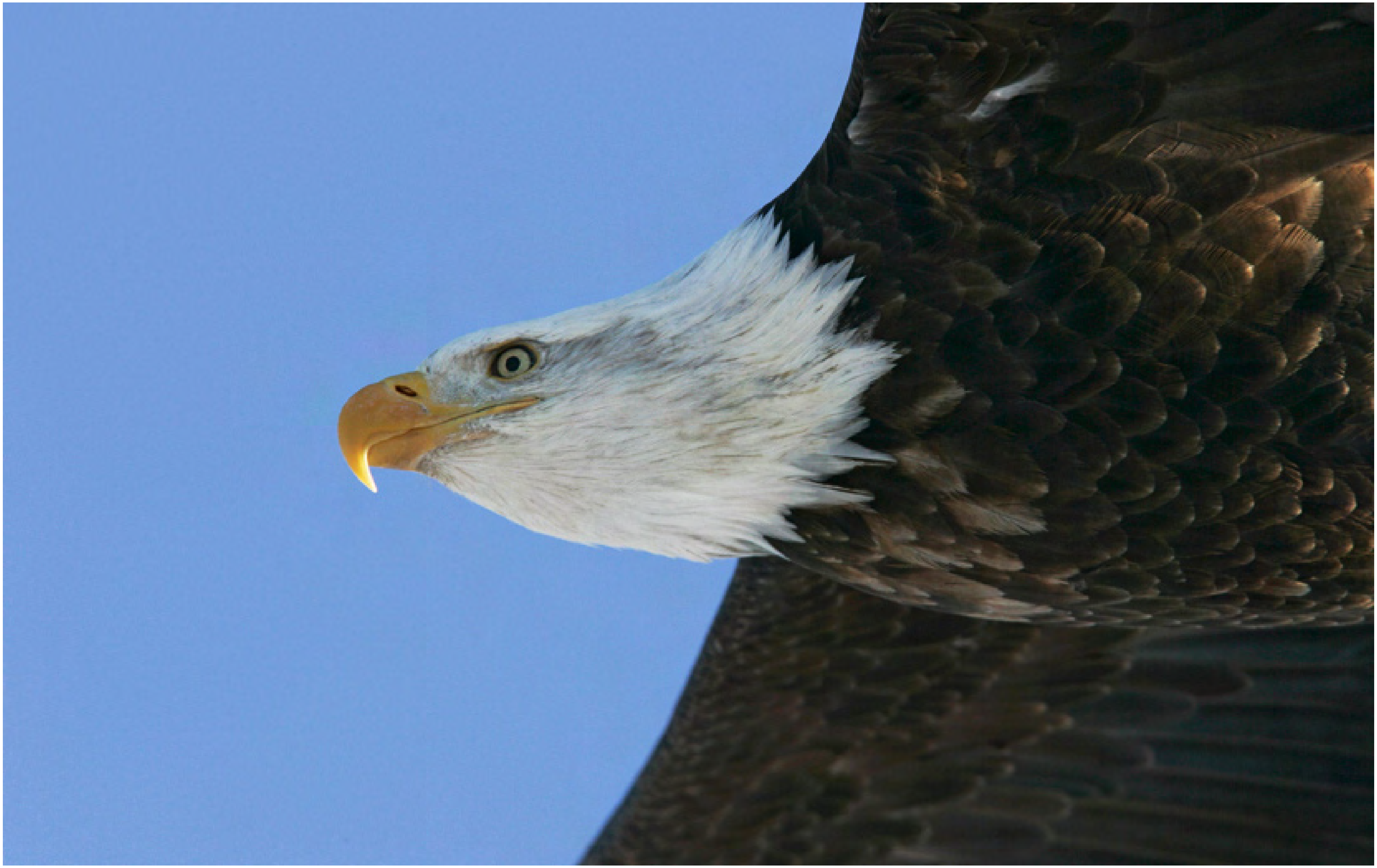
Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 320. Evaluative Metering at zero (with the soft light there was no need to underexpose): 1/200 sec. at f/11.

This simple vertical composition leaves enough room for a magazine title. Notice that I chose to center the subject from side to side while leaving an edge of blue in the lower right corner.

Bald Eagle, adult with landing gear down, Homer, AK

Canon 300mm f/2.8L IS lens (handheld) with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/1000 sec. at f/6.3.

Here is another powerful composition resulting from the angled placement of the subject's wings in the frame. The clenched talons add to the feeling of power. Images like this that represent a concept (power and strength) have potential as money-making stock photographs.



Bald Eagle, backlit in flight, Homer, AK

Canon 300mm f/2.8L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/640 sec. at f/6.3.

Opportunities for creating head portraits of birds in flight are few and far between, especially when using relatively short lenses. I panned to have the bird fill roughly two thirds of the frame while leaving space on the left for it to fly into. And I succeeded.

Bald Eagle, adult landing on ice floe, Homer, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/2000 sec. at f/5.6.

Here I left lots of room in front of the bird. The clean, white ice made for wonderfully interesting backgrounds on my first trip to Homer.

Bald Eagle, close-up of adult neck and back feathers, Homer, AK

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/320 sec. at f/16 in Av mode.

Here, the contrast between the black body feathers and the white feathers of the head adds interest. With relatively nice light and digital capture, holding detail in the whites while maintaining detail in the blacks was easy but vital to the success of the image.

Chapter III

Digital Photography

Snow Geese at dawn
Bosque Del Apache, NWR
San Antonio, NM

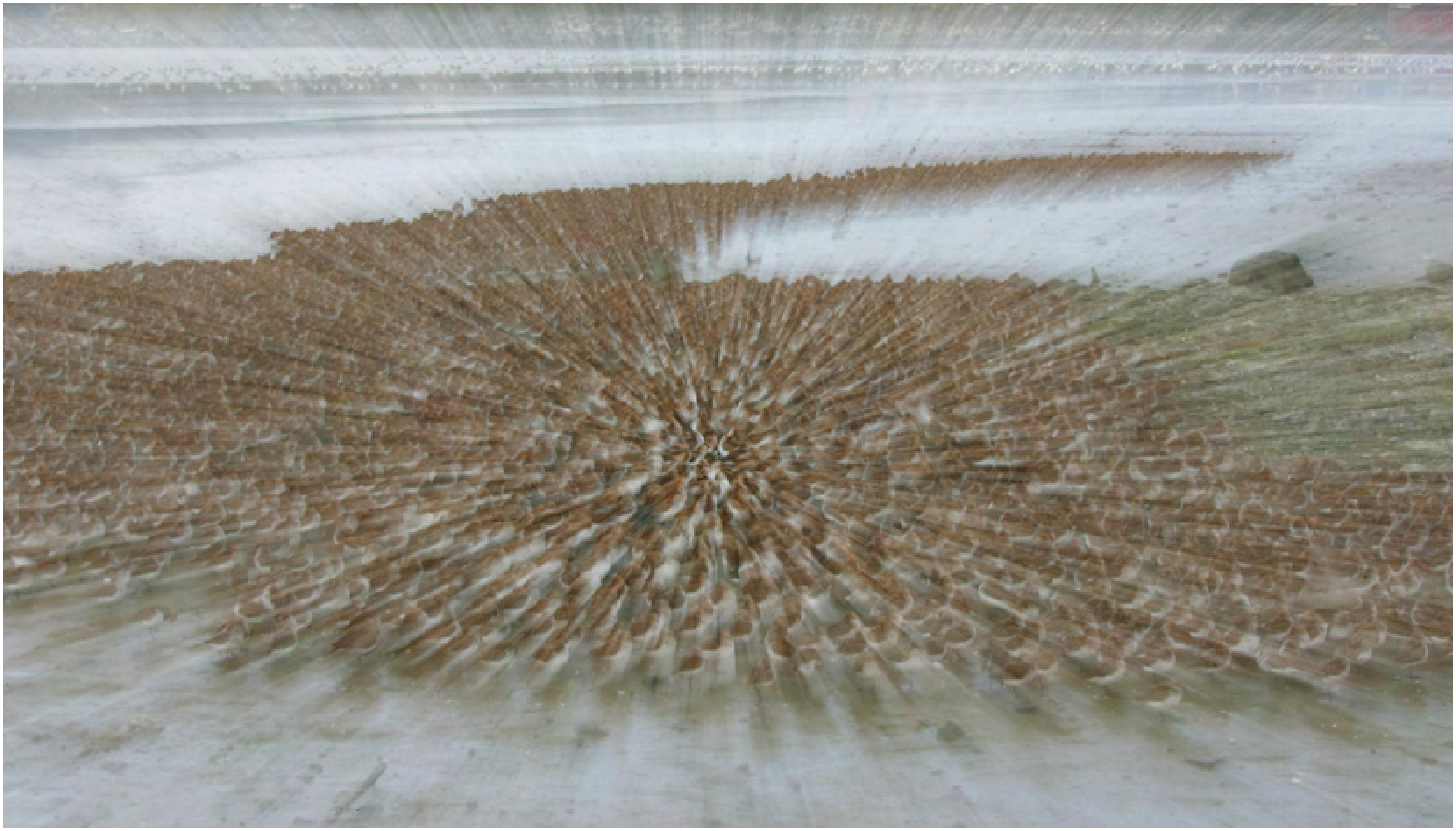
Canon 100-400mm L IS zoom lens (handheld at 180mm) with EOS-1D. ISO 800. Evaluative Metering +1/3 stop in Tv mode: 1/10 sec. at f/8.

If I remember correctly, this image was one of the first that I made on the morning that I decided to commit totally to digital. I learned more about making intentionally blurred images that morning than I had in twenty years of shooting film. Why? You can see the image that you have just created on the LCD screen on the back of the camera, and, more importantly, the shutter speed and aperture are displayed along with the image. In addition, they are recorded as part of the EXIF data for later study. Most important of all, digital is big-time fun.

In early 2002, I wrote, "Some time in the future—probably around 2023 or so—Darrell Gulin and I will surely be the last two professional wildlife photographers using film…" In November 2002, I made my annual pilgrimage to Bosque Del Apache NWR in New Mexico with several film cameras and my very own brand new Canon EOS-1D digital camera. I used the 1D for most of my photography on that New Mexico trip, exposing only twelve rolls of film in seventeen days… On my ten-day San Diego, California, trip in January 2003, I brought and used only my digital 1D. And on my nineteen-day trip to Tanzania that began on January 22, 2003, I brought two camera bodies: the 1D and a Canon 1Ds (which produces a relatively huge 11 megapixel file, nearly three times the size of the files produced by the 1D). Why this sudden and dramatic change of heart?

First, and most importantly, digital photography is fun, immense fun. While I have enjoyed photographing birds (and other natural history subjects) each and every day that I have been afield since August 1983, I had more fun photographing at Bosque than I had ever had before. And the fun continued nonstop on my Africa trip. Digital photography allowed me to experiment creatively with slow shutter speeds (especially when hand-holding an intermediate telephoto zoom lens) and to try many new techniques with flash. These included flight photography with flash in extremely low light situations, and flash blurs (where flash is used in conjunction with extremely slow shutter speeds while using the correct ambient exposure). Both of these techniques yielded many wonderful images that were entirely different than anything I had done before. And digital gave me the freedom to try my first zoom blurs. Attempting to produce zoom blurs involves zooming in or out while using extremely slow shutter speeds. This is not as easy to do as it sounds. It seems at times that even though I start zooming *before* releasing the shutter and continue zooming *after* the shutter curtain closes that the effect of the zoom is often not apparent.

And it's not that you can't achieve the same or similar results with film, but when doing so you are pretty much experimenting blindly and the results can be both disastrously bad and relatively expensive. With film, each frame costs thirty to forty cents, and you can easily expose more than a hundred frames when trying a new technique. Experimenting with film can get expensive quickly… With digital, however, it does not (once you've made the initial investments, which can be considerable) cost a penny to try something new, even with techniques that are way out there, those that are really pushing the creative envelope. Your total "film and processing" costs with digital are zero. In addition, you can fine-tune your results on the spot by first reviewing the LCD image on the back of the camera and then by checking the histogram, the graphic representation of an image's exposure information. If the exposure is not what you wanted, you can make the image lighter or darker as needed simply by using the exposure compensation dial to add or subtract light as needed. (Note: as far as exposure is concerned, it is always best to depend more on the histogram and on the flashing highlight alert than on the LCD image on the camera back.)



Western Sandpiper flock, Cordova, AK

Canon 70-200mm f/2.8L IS zoom lens at 90mm (handheld) with EOS-1D Mark II. ISO 100. Eval. Metering at zero: 1/10 sec. at f/32 in Tv mode.

Creating impressionistic zoom blurs is fun, but more difficult than you might think. Here, I used a low ISO setting to ensure that I could obtain a slow enough shutter speed. Start by zooming in to the long end of the focal length and focusing on the center of the flock with One-Shot AF. Depress the shutter button as you zoom to a wider focal length. When you first begin attempting zoom blurs, it pays to practice the zoom-out a few times before depressing the shutter button. Once you are all set, make lots of images by varying both the shutter speed and the rate of the zoom-out.

Digital cameras handle contrast far better than slide films, that is, they are better able to maintain detail in both very dark and very light areas of an image. And, as long as you have not grossly ***over-*** (or under-) exposed an image, exposure errors may often be easily corrected in Photoshop. And by utilizing Raw mode, which offers the largest files, it is a snap to correct exposure errors while converting the Raw images. (The Raw images that come directly from the camera cannot be viewed by most image-editing software and need to be converted to TIFF or PSD files before they can be processed.) A further plus, as far as exposure is concerned, is that most digital cameras offer a highlight over-exposure alert feature: when viewing the LCD image, any area with over-exposed highlights will flash black, thus warning the photographer that the image needs less light. As above, this can be done simply and quickly. (Note: With some digital cameras, this feature is always on; with others, it needs to be set, either via the menu or as a custom function. Check your camera body manual for details.)

Osprey
Placida, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/250 sec. at f/14 in Program mode. Fill Flash at -2 stops with Better Beamer.

With the filtered sunlight and Fill Flash, revealing the detail in the darkest areas of the Osprey's plumage while maintaining the detail in the white feathers was child's play for digital. Image Stabilization helps maintain image sharpness when photographing from a rocking boat.

Great Egret, Lake Martin, LA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Here I took a meter reading off the sky, added 3 stops, and set that exposure manually: 1/25 sec. at f/18.

The immediacy of digital photography is a blast for me. Being able to look at the LCD and see that I have made a good image right on the spot is both great fun and extremely rewarding. I let out a yelp when I saw the cool position of the bird's head against the far wing. Panning with the subject at slow shutter speeds produces the pan-blurred backgrounds that imply motion. When creating images of this type, digital photographers have a huge advantage as they are able to get an idea of the amount of blur at a given shutter speed and subject distance.

Part of the fun of digital photography is that it offers immediate gratification: there is no more waiting a week for the film to get back from the lab. More importantly, digital offers immediate feedback. As mentioned above, a glance at the histogram enables you to guarantee that the exposure is pretty much as you want it, or at least good enough to work with in Photoshop. And while viewing the image on the LCD screen on the back of the camera has its limitations (it's not easy to judge critical sharpness on many digital camera bodies), you can download images to your laptop at lunch or in the evening and know whether you have gotten the images that you were after.

Digital photography is an absolutely incredible teaching tool. If using digital, leaders can share compositions in the field by way of the aforementioned LCD screen. In addition, they can share images at lunch or in the evening with the group to illustrate various photographic principles, to show them what they should or should not be doing, or simply to serve as inspiration. For students who are photographing digitally, the instructor can offer help with composition, image design, and exposure right on the spot, in the field. And the students can share photos with the group on a laptop after the field session is over with critiquing of the images a natural follow-up activity.

In 2000, 2001, and 2002, my business, BIRDS AS ART, spent more than $60,000 in total on film and processing. With digital, after your initial investments, these costs are zero. During that same time period, we spent nearly another $30,000 making 35 and 70mm duplicates for distribution and for slide program projection. With digital, these expenses will be reduced drastically with our only cost being that of the blank CDs or DVDs onto which copies are occasionally recorded. When using film, it is ideal to make multiple in-camera duplicates of family-jewels-type images—I'd often take nearly a whole roll of the same subject in the same pose. With digital, one good original can be archived and duplicated as often as need be. And all of the "copies" are identical to, and therefore just as good as, the originals… As a result, I wind up making far ***fewer*** images with digital on a given day than I would have had I been using film.

Traveling with film, especially with the large amounts required for long overseas trips, has become increasingly difficult in the post 9-11 era. The sheer weight and bulk of 300 rolls of film in addition to a photographer's normal complement of carry-on baggage (which generally includes two camera bodies and several lenses including a super-telephoto) is a big travel burden. Film must ***never*** be sent in checked baggage as many large airports have powerful X-ray machines that will destroy most films. Security personnel may insist on X-raying film, and the cumulative effects can cause problems. In some foreign airports, a single pass through even the security X-ray machine can destroy a month's work. X-rays, however, do not affect either the compact flash cards on which digital images are recorded or the laptop computers on which they are saved and stored.

The environmental impact of film and film processing (see photo on right) is great—tons of poisonous chemicals and plastics are involved in film manufacture and processing, and most of these materials wind up being discarded. And while there is concern about the environmental impact caused by the manufacture and disposal of computers and their various components, digital photographers account for only a tiny fraction of the total number of computer users worldwide. In addition, it is obvious to me that environmental impact of a single flash card used several thousand times over will be a tiny, tiny fraction of that resulting from the use and processing of many thousands of rolls of film…

In late March 2003, I purchased my first digital slide projector, the Epson 720C, and downloaded a slide-show program from the Internet. I used the 720C only with images that were made with digital cameras and was most impressed with the quality of the projected images, especially with the brightness of those images. Since that time, we have incorporated many scanned film images into our slide programs, so there is no need to lug boxes of slide trays around the country to various speaking engagements. With the latest Canon projector, which cost about $4,000 when it was introduced in Spring 2005, projected digital images now look at least as good as the best projected slides, and even with less expensive digital projectors, the quality is getting better while the price of the projectors continues to drop.

Western Sandpiper molting into breeding plumage, Fort DeSoto Park, Tierra Verde, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/160 sec. at f/11.

This image was used with my article "Crossing the Digital Divide," which ran in the Summer 2003 issue of Living Bird *magazine.*

I was thrilled in early 2003 when editor-in-chief Tim Gallagher of *Living Bird* magazine asked me to do an article detailing the reasons that I switched to digital photography, and I applauded both Tim and design director Kat Dalton for their willingness to take a chance with digital imagery at a time when many others in similar positions were (quite foolishly in my opinion) unwilling to do so. Some editors are wary of the quality of digital images, and few realize that the quality of the images from the Canon EOS-1Ds far exceeds the quality attainable with any 35mm film. In addition, many folks do not realize that nearly all of the film-based photographs that they have been seeing in magazines for years have been printed from digital files created by scanning the original photographs. Digital photography is the wave of the future, and I for one was happy to be riding the early crest.

right and below: Snow Geese and cranes at dawn
Bosque Del Apache NWR, NM

With 11 million pixels, 1Ds images can be cropped severely while maintaining sufficient quality to be printed large. After going to Mark II bodies, I used the 1Ds with wide-angle lenses so that I could take advantage of the full-frame sensor. When using digital cameras with multiplier effects with short zoom lenses, you lose the widest focal lengths.

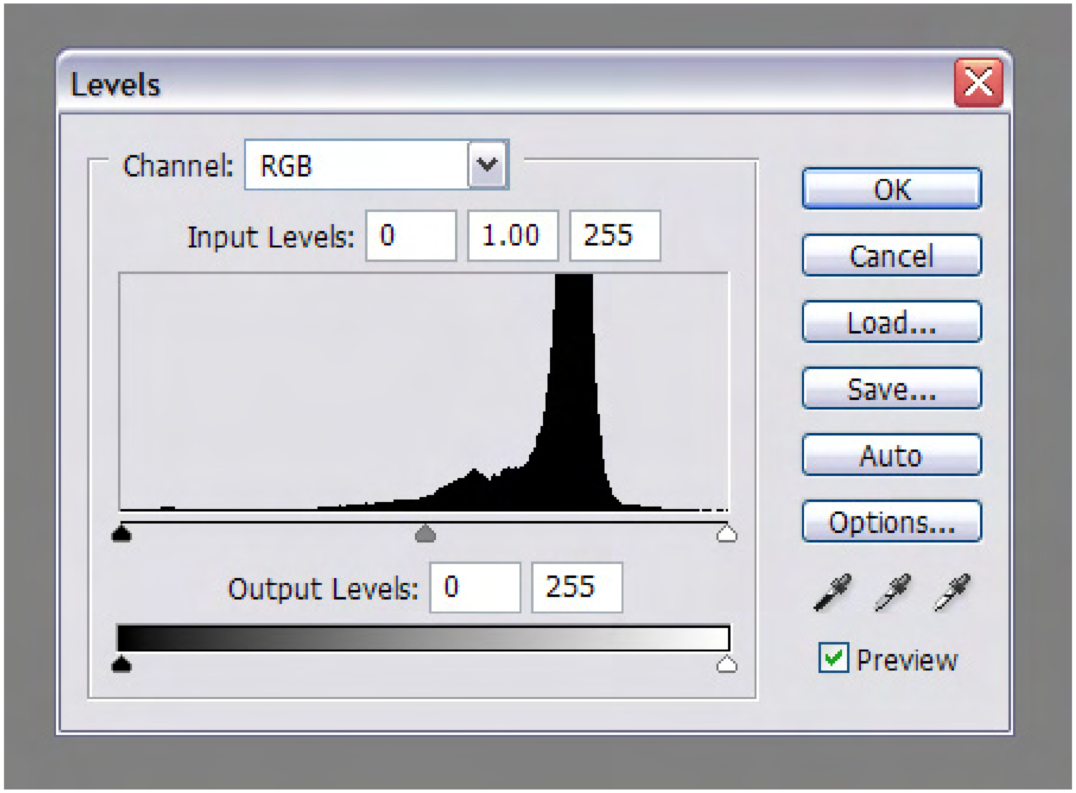
The image above is the full frame original. Canon 16-35mm (handheld at 16mm). ISO 400. Evaluative Metering +1/3 stop: 1/125 sec. at f/4.5. The image below is a panoramic crop of the original.

Understanding Histograms

Of all the advantages that digital offers the serious photographer, none is more important than the ability to verify your exposures in the field by checking the histogram. I am, however, often amazed at how many folks on our BIRDS AS ART/Instructional Photo-Tours simply have no idea how to read and interpret digital photography's most valuable asset, the histogram.

Histogram Primer The histogram is a graph that represents the various tonalities in an image. The dark tones are normally to the left of center, the light tones to the right, and the middle tones in the middle. The higher the peak, the more pixels there are of a given tonality. When working with front-lit subjects, you usually do not want the edge of either the light or the dark peak to touch an axis and ***the right end of the histogram should never touch the axis when working with direct frontal lighting.*** If part of a peak is touching either axis, it means that there are portions of your image that lack detail. If a peak on the left is "pegged" (up) against the left-hand or dark axis, it indicates that there are underexposed, detail-less blacks in your image. If data on the right is pegged, then you have overexposed whites. ***If your data is too far to the left, you add light by putting in + (plus) exposure compensation. If your data is too far to the right, you need to subtract light by putting in – (minus) exposure compensation.*** If possible, leave some space between the left most data and the dark axis. On the opposite side, I generally try to leave at least a bit of room between the data and the white axis to ensure that I avoid overexposing the highlights. When working with front-lit subjects, it is mandatory to check the right side of your camera's histogram; you always want some data spilling into the fifth box on the right. Doing so yields files with more information and less digital noise than those produced by following the advice to "expose to the left and then lighten the image in Photoshop."

For twenty years I have used a full-screen metering pattern



This is the histogram for the converted Raw image of the Least Tern photo on the facing page. Notice that with the bulk of the image consisting of light tones, the bulk of the data is located to the right of center on the histogram. Neither the black tones on the left nor the white tones on the right are pegged against their respective axes, indicating that the exposure was perfect. Notice too that the data is spread across five full stops. This indicates that digital's full tonal range was needed to produce an image with detail in both the blacks and the whites.

The very low plateau to the left of center represents the darker tones in the image, the birds' black caps and eyes, the bits of dried beach grasses, and the birds' shadows. The relatively tall mountain to the right of center represents the sand and the light gray areas of the birds' feathering, while the low plateau to the right of that corresponds with the whiter tones of the birds' breasts and foreheads.

Least Terns courting, Lido Key, Sarasota, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering a+1/3 stop: 1/1000 sec. at f/11.

The success of beach-nesting birds varies greatly each year and is largely dependant on the amount of disturbance by humans and predators.

left: The converted raw file saved as a TIFF.

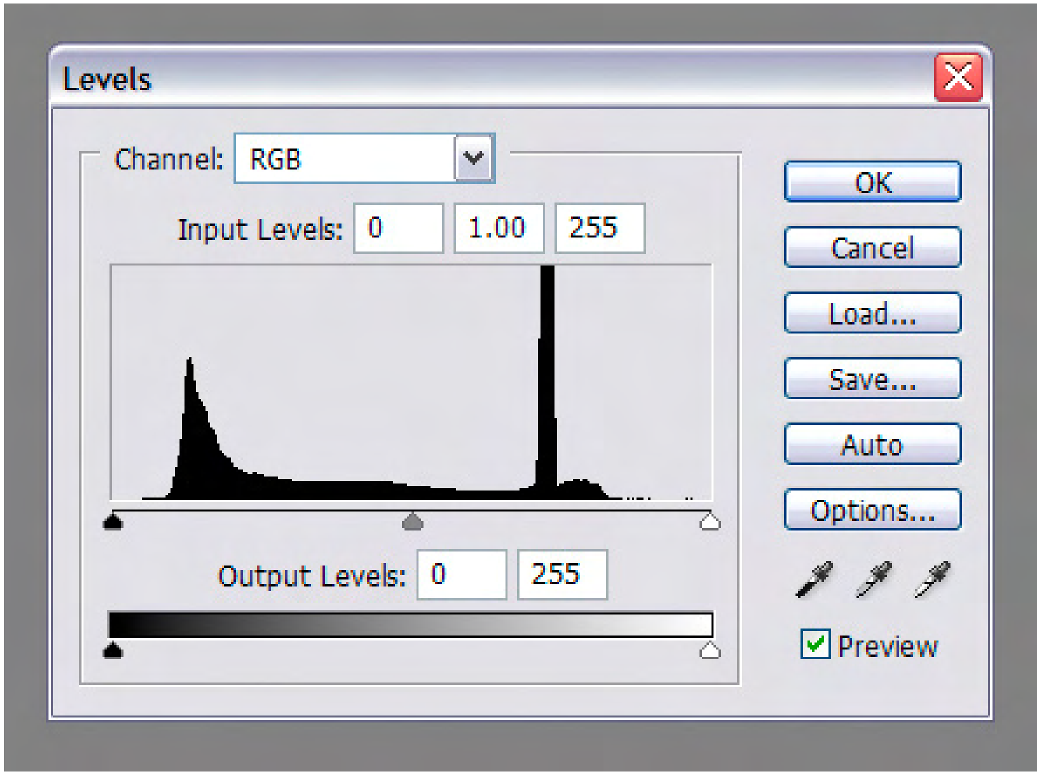
facing page: The optimized file.

Though the finished photo on the right is brighter and shows more contrast than the original image on the left, note that the contrast is not excessive.

The histogram on the right is the histogram of the original image above. Note that there is space between both the white axis and data and between the black axis and the data. This shows that the image is much less contrasty than the previous Least Tern image. There is less contrast because the light in the Osprey image was much softer.

The small peak on the left represents the bird's dark feathers and its black bill. The tall peak to the right of center represents the light tones of the sky, and the small plateau to the right of that peak corresponds to the white feathers of the neck and head. In the Photoshop section that follows, you will learn to pinch in both the black slider and the white slider to increase contrast. You can see the result of this Levels Adjustment in the optimized image on the facing page.

Here is a very fine point: Though the exposure is a good one, adding a full stop of light (rather than the 1/3 stop that I added) would have provided a file with more color information and, after optimization, one with less noise.



Osprey, fresh juvenal plumage, Indian Lake Estates, FL

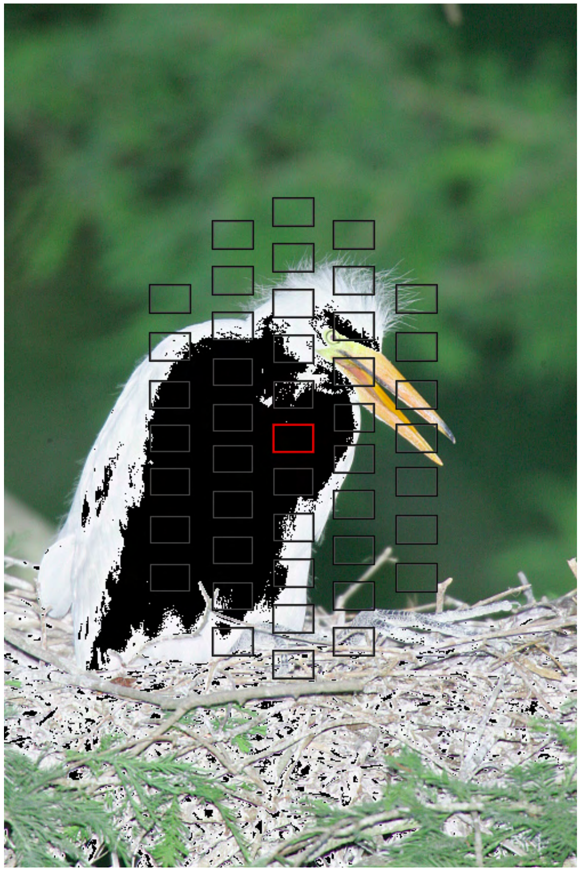
Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II on beanbag in car. ISO 250. Evaluative Metering +1/3 stop: 1/200 sec. at f/16.

By positioning my vehicle with great care, I was able to hide a metal pole behind this young Osprey's head, neck, and upper torso.

to help me come up with correct exposures. I now rely on Canon's Evaluative Metering system nearly 100 percent of the time, adding or subtracting light as needed. The guidelines below will work well for pretty much all segmented metering patterns (including evaluative, matrix, and honeycomb). Here are the principles that served me well when I used film:

- When the sun is at full strength, scenes that average to lighter than a middle tone will be exposed correctly without compensation. When the sun is out, the meter is smart!
- On cloudy or overcast days in the same situations, you need to add light to prevent underexposure. Add 1/3 to 2/3 stop of light for scenes that average a bit lighter than a middle tone, 1 to 1 1/3 stops for very light scenes, and 1 2/3 to 2 stops for scenes that average to white. When photographing birds in flight against white skies, it is often necessary to add 2 to 3 stops of light exposure metered off the sky without the bird in the frame. When the sun is in, the meter is not so smart…
- With scenes that average to a middle tone, use the suggested evaluative meter reading when the sun is out, but add 1/3 stop in low light.
- With scenes that average to darker than a middle tone, subtract from 1/3 to 1 full stop of light (depending on how close to black the scene averages).
- When the sun is shining brightly and you are working against middle-toned or darker backgrounds, always subtract at least an additional 1/3 stop of light if there are white or unusually light highlights present.

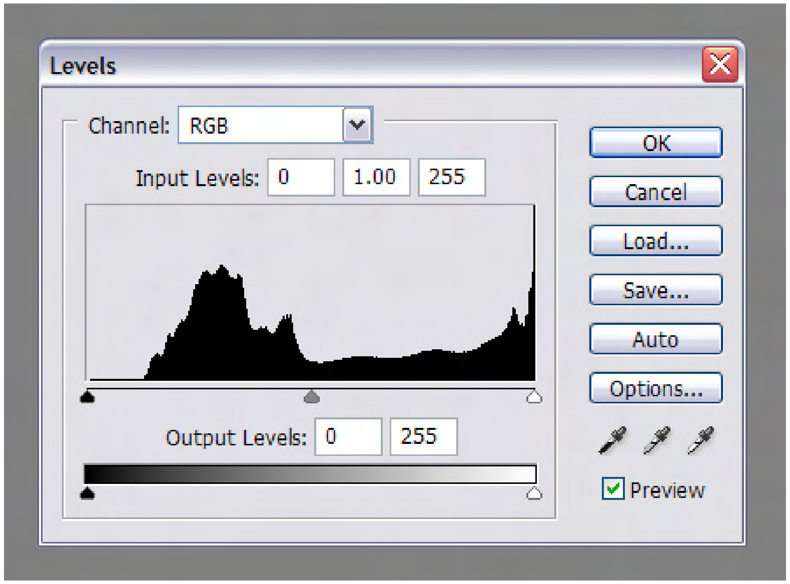
So where do we start with digital? With most high-end digital cameras, exposure with digital is exactly the same as exposure with film. Some digital cameras, most notably the Canon EOS 10D and 20D and many Nikon bodies, however, tend towards overexposure. Furthermore, you need to guard against overexposing the highlights with digital as much as you did with film. It is mandatory that you activate the highlight alert feature on your digital camera (if it has one). When you view an image on the LCD screen, any overexposed highlights will flash black on the LCD to alert you to the fact that you need to subtract light from the exposure. To make your image darker and avoid burning the whites or highlights, simply subtract light from your exposure as needed. As long as you are making your images in raw mode, slight errors of over-exposure can be corrected during conversion. (Note: On the 10D and 20D cameras, the flashing highlights can be seen only on the small image that accompanies the histogram. On most higher-end digital bodies, they can be seen on the full-sized LCD images.)



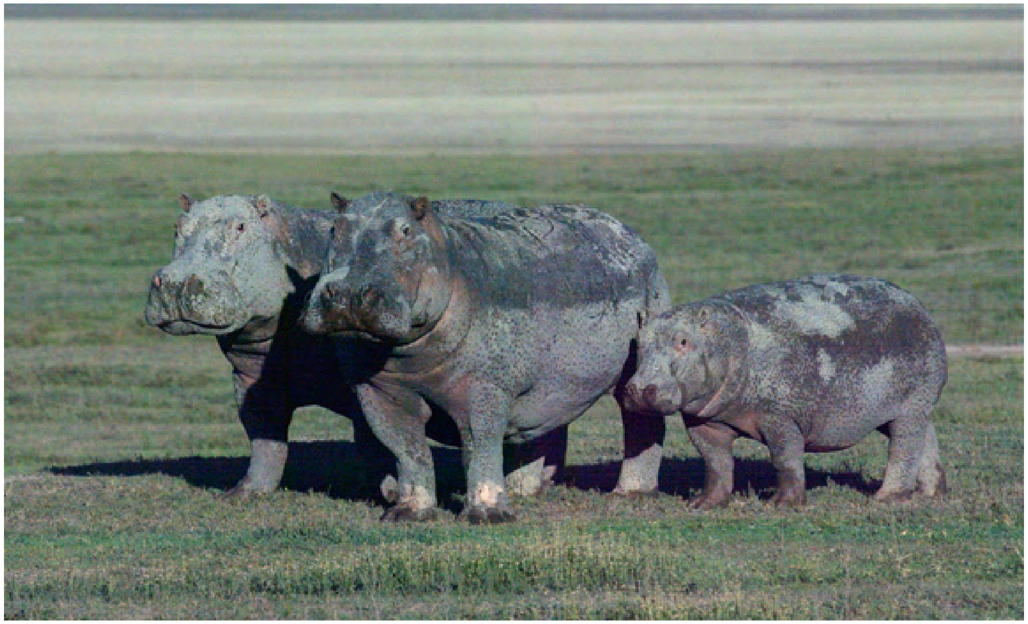
The image on the left was accidentally overexposed: I forgot that I had been working another subject in Manual Mode. If you saw this on the LCD on the back of your digital camera body, the black areas would be flashing, indicating that those areas were overexposed and detail-less.

It is rare for experienced photographers to make such gross exposure errors. In most cases, only a few pixels will be overexposed in an image and the flashing black areas will be tiny. Most times many of us older folks will need our reading glasses. When only a tiny area of an image is burned out, you will usually need to subtract only 1/3 stop of light to prevent the flashing highlight alert from appearing. The histogram for this image is on the facing page.

Correcting slight-to-moderate—and even at times severe—errors of underexposure can be done during conversion or afterwards using either a Levels and/or a Shadow/Highlight adjustment (or both) in Photoshop. At right, I saved a great hippo image that was three stops underexposed (top image) by lightening it 1 1/3 stops during the raw file conversion and then lightening it nearly two more stops via a Levels Adjustment in Photoshop. I always use raw Mode when making digital images. The raw files provide the highest quality image files and allow many exposure errors to be corrected during conversion. Though it is something that I rarely do, you can make White Balance changes when converting raw captures as well. If your camera does not automatically include an embedded J-PEG with the raw files, it is best to use RAW + J-PEG. The J-PEGs allow for lightning-fast editing as they do not have to be converted before viewing and load very quickly. (It is not necessary to utilize RAW + J-PEG capture with the EOS-1D Mark II or the 1Ds Mark II cameras as a J-PEG is automatically embedded in the raw files as the images are created.)



Histogram for image on facing page: Note that on the right (highlight) side of the histogram the data is pegged up against the axis. This indicates that there are overexposed pixels; the black line on the axis extends to the top of the graph indicating that there are lots of detail-less pixels.



Hippo family, Ngorongoro Crater, Tanzania

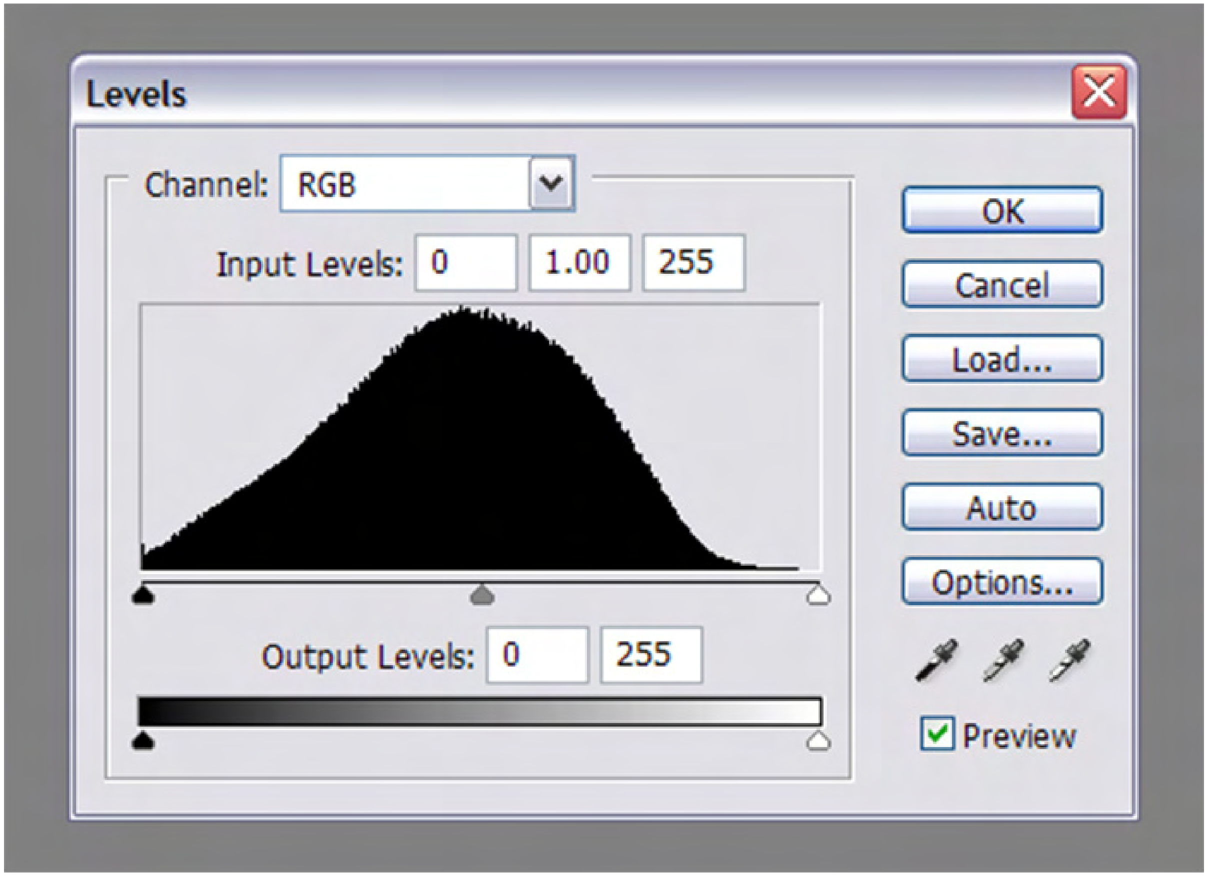
Canon 100-400mm L IS zoom lens with EOS-1D. Evaluative Metering -3 stops. Ooops! Converted image above, optimized image below.

Had I been using film or J-PEG capture for this image it would have gone in the trash.

When photographing with a digital camera, always strive to make your first exposure in a given situation a perfect one. Do not simply guess at the correct exposure and then rely on a histogram review to come up with the perfect exposure. Expose exactly as if you were using film (as described above). For a complete, thorough, and easily understood explanation of exposure theory, get a copy of *The Art of Bird Photography: The Complete Guide to Professional Field Techniques*. You can order a signed copy of the soft-cover edition from our web site, www.birdsasart.com.

Unless you are positive that you have the situation right, or there is incredible action happening right in front of you, it is usually best to check the histogram after making the first image in a given situation. Make sure that the darks are to the left, the middle tones are in the middle, and the lights are to the right, and do make sure that you have not pegged data on either end (when photographing front-lit subjects). ***Remember, to move the histogram data to the left, subtract light. To move it to the right, add light.***

By learning to interpret your histograms and to adjust them by adding or subtracting light as needed, you'll quickly learn to come up with perfect exposures most every time. And as a bonus, the time you spend in Photoshop working on your images will be greatly reduced. Let's take a close look at the accompanying images, work our way though each exposure challenge, and interpret a few more histograms.



Exposure for the image on the right was fairly straightforward: with middle-toned birds on a middle-toned background, I simply used the metered exposure. The bulk of the tonal data is, as one would expect, centered around the middle of the histogram. The darker tones of the birds' upperparts are on the left side of the bell curve, and the lighter feathers of their under-parts are to the right.

facing page: Western Sandpiper flock, Cordova, AK

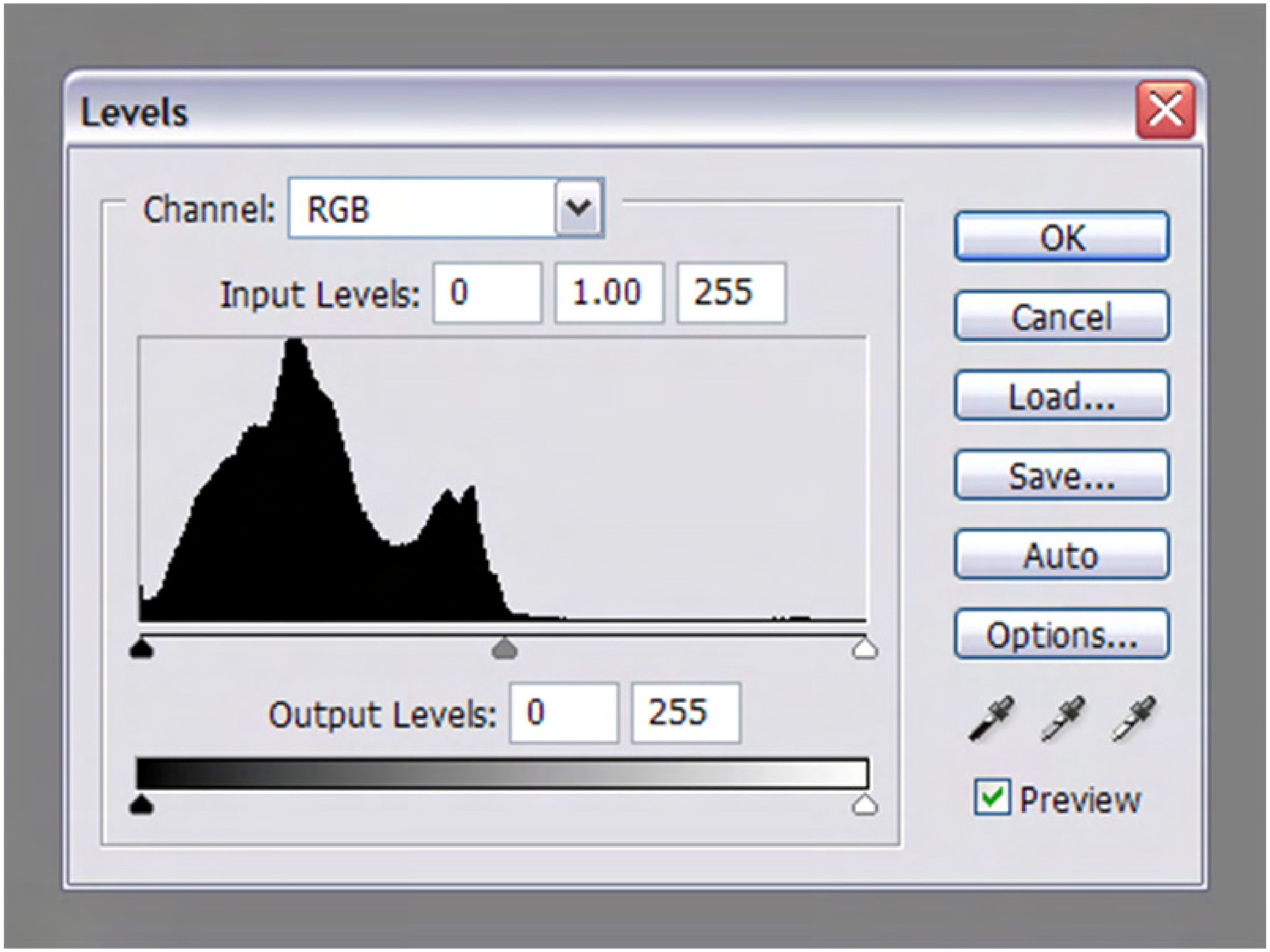
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/60 sec. at f/22.

I planned my trip to Cordova to coincide with the peak of shorebird migration, but the birds came, and left, a week early. I was lucky—with the help of local Milo Burcham—to get to photograph this mat of birds right in town.

left:
Common Loon, Soldotna, AK

Canon 500mm f/4L IS lens with EOS-1Ds. ISO 250. Evaluative Metering -2/3 stop: 1/1250 sec. at f/4. Fill Flash at -1 1/3 stops with Better Beamer.

This is another in a wonderful series of images that I was able to create with the help of professional loon guide John Toppenberg. This simple portrait, which features elegant early morning light and bands of sunlight reflected from the lake's ripples onto the loon's head, was used on the front

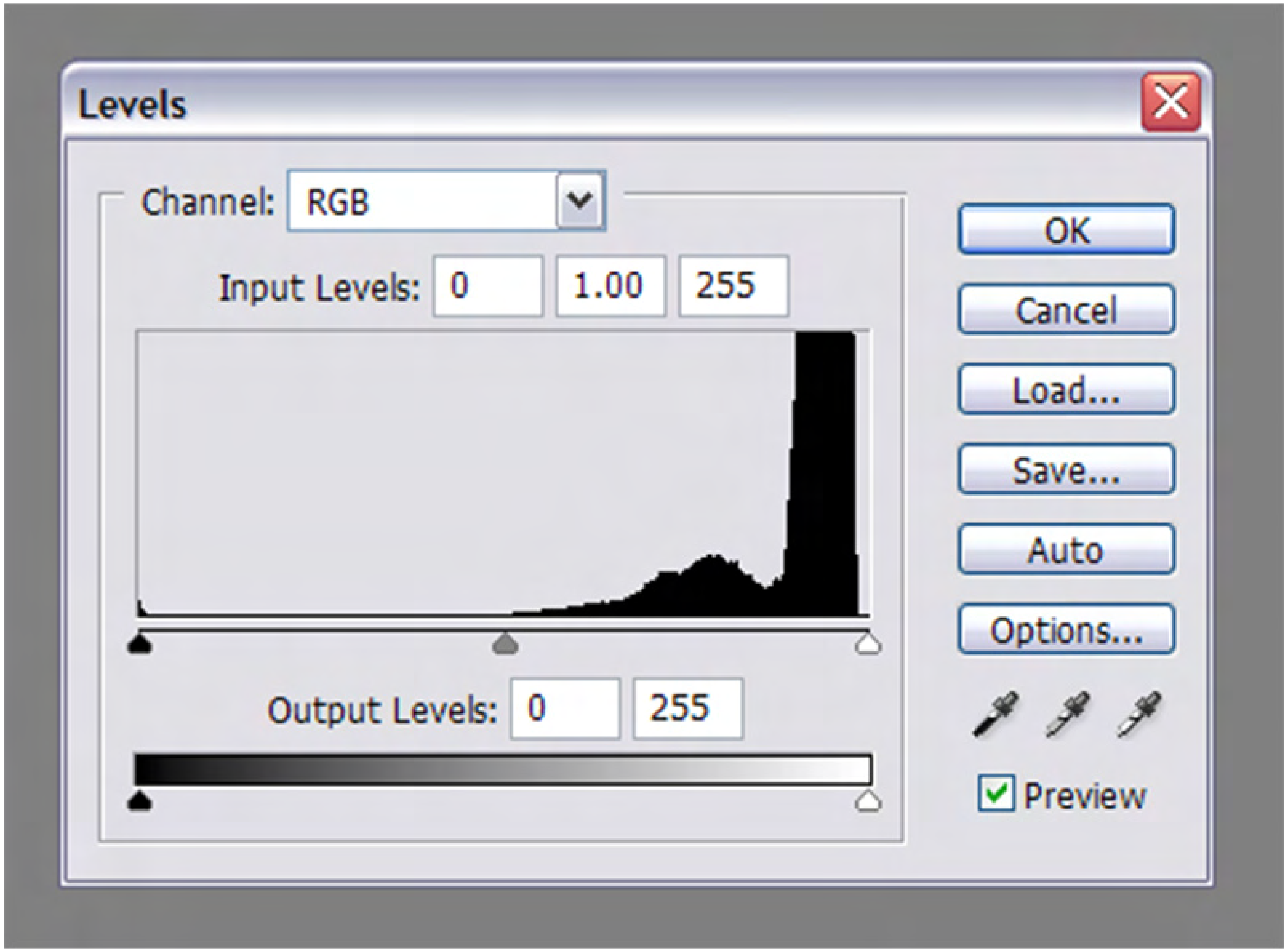


With the dark tones of the green water I knew that I would need at least -2/3 stop of underexposure to keep from burning the bird's bright white upper breast. Note that with the predominance of dark tones, the bulk of the data is left of center on the histogram. There are actually some detail-less black pixels as indicated by the small amount of data pegged up against the left or dark axis. Setting a lighter exposure to prevent underexposing the blacks was not an option as that would have resulted in burning out the highlights, in this case the white feathers of the bird's breast. If you must peg something it is pretty much always better to peg the darks than to peg the highlights.

I love doing flight photography on white sky days. I take a meter reading off the sky, open up from 1 1/3 to as much as 3 stops, set the exposure manually, check the histogram, and then tweak the exposure as needed.

In the histogram, at right, note that the bulk of the data is well to the right of center: "whites to the right." One might think that the bird, being pure white, is lighter-toned than the sky, but that is not the case. The bird's undersides are actually somewhat shaded. The sky, which is lighter toned than the bird, is represented by the tallest mountain of data on the right of the histogram. The smaller hill just to the left of the largest mountain represents the bird's shaded underparts.

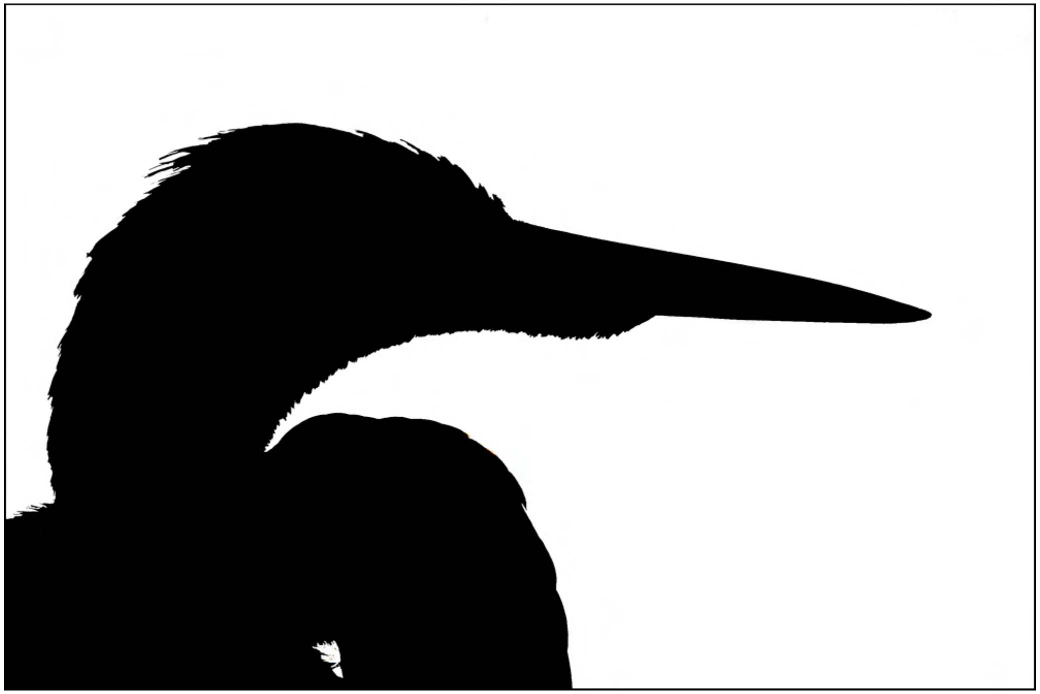
Note that there are some pegged black pixels on the left side of the histogram; these represent the darkest tones of the bird's black legs.

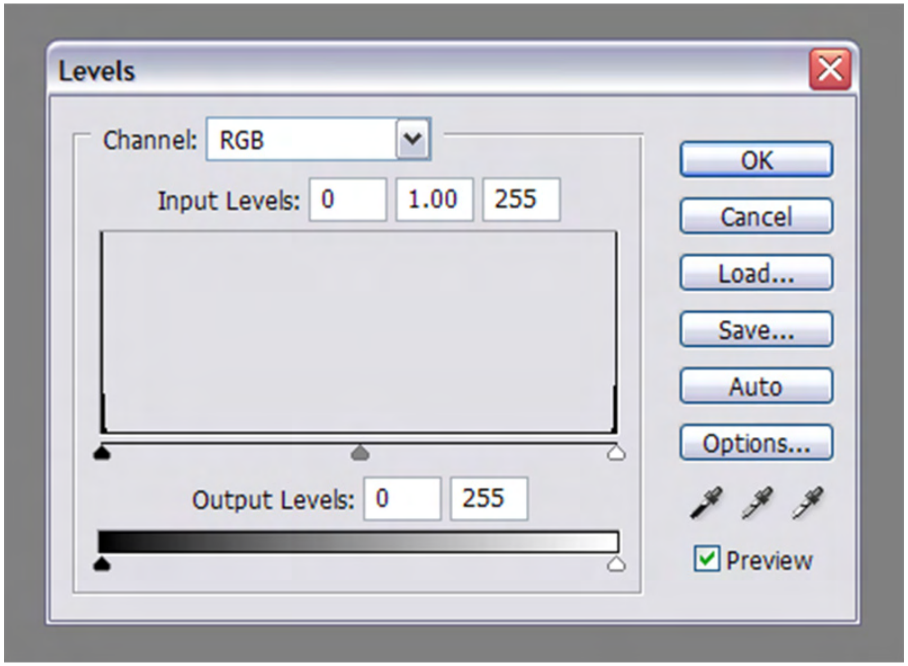


facing page:
Great Egret, St. Augustine Alligator Farm, St. Augustine, FL

Canon 70-200mm f/2.8L lens with 1.4X II TC and EOS-1D Mark II. ISO: 400. Took meter reading off the sky and opened up 2 1/3 stops: 1/1250 sec. at f/4 in Manual Mode. Fill Flash at -1 stop with Better Beamer and High Speed Synch.

The Alligator Farm offers superb flight photography especially when the various species are building nests.





Great Egret, St. Augustine Alligator Farm, St. Augustine, FL

Canon 300mm f/4L IS lens with EOS 10D. ISO 100. Evaluative Metering -3 stops set manually: 1/200 sec. at f/22.

The photo illustration above was created by selecting the background, transforming the whites to detail-less white with a levels adjustment, selecting inverse, and then transforming the blacks to detail-less black with another levels adjustment. In each case the selection was feathered. Not-to-worry, if the above does not make sense to you right now, it will when you finish the Photoshop section in this chapter.

At first glance, it looks as if there is no tonal data in the histogram above. Note, however, that the dark or left-hand axis, which is normally gray, is black. And the highlight axis, the one on the right, which is usually white, is dark gray. The black line on the left-hand axis indicates that all of the blacks are underexposed and detail-less. The dark gray line on the right-hand axis shows that all of the highlights are overexposed and detail-less. Note that the height (not the width) of a given tonal line indicates how much of given tonality is present in an image. For all practical purposes, there are only two tones in this image: black and white. I'd venture to say that about 1/3 of the pixels are black and 2/3 of them are white, yet each is represented by a thin line. (The thin dark line just inside each axis that extends about 1/4 of the way up represents very dark but not detail-less tones on the left and very light but not detail-less tones on the right.

The Digital Workflow

It is important to note that the workflow described below is the way that I do things using a PC platform, BreezeBrowser, and Downloader Pro. BreezeBrowser is not available for MAC users. In addition, do know that in the Photoshop section that follows, there are many, many ways to do the same thing. The procedures described below are the ones that I use on a daily basis, ones that I have learned from others and ones that do not—for the most part—degrade the image. MAC users will be able to follow all of the Photoshop instructions by learning the MAC equivalents of the various keystrokes. Here—from Ellen Anon—are the basic ones: Alt = Option; Control = Command (Cmnd—the key with the apple on it); and right click = Control click. My workflow is designed to make my images look as good as possible in the shortest possible time.

The Basics

I use compact flash cards as my digital film. You insert the flash card (which is simply a memory storage device) into the camera before making any photographs so that the camera can then record and store the images on the flash card. I began using Delkin 640 megabyte e-film Pro Cards and found them to be quite dependable and pretty much indestructible. (In May 2004, I had one thrown out with the kitchen trash in a Chinese restaurant; after we picked it out of the chow mein and wiped off the pork fried rice grease, it functioned perfectly…) In July of 2004, I added several Delkin 1 gigabyte e-film Pro Cards, and in early 2005, began using Delkin 2GB e-film Pro Cards. After thousands and thousands of uses, I have had two card failures, and in each case Delkin honored their lifetime warranty and replaced the cards with new ones. Some folks opt for micro-drives, which come with greater memory and are far cheaper per megabyte, but micro-drives have moving parts and may fail or become corrupted when dropped or otherwise jarred. As I can be quite careless at times, I opt for the far more dependable compact flash cards. (Note: BIRDS AS ART is a Delkin dealer. Visit http://www.birdsasart.com/delkin.htm for details.)

It is best to store your compact flash cards in a digital wallet when they are not in the camera or in a card reader so that they are accessible and safe. ***Make it a habit*** to zip or Velcro-shut your digital wallet to prevent the inadvertent loss of a card. Compact flash cards should ***always*** be in one of only three places: your camera, your digital wallet, or your laptop. Do note that "on the table in a Chinese restaurant" is ***not*** on the list…

Unless they are making only J-PEGs, even the most conservative photographers will need at least 2 to 3 gigabytes of flash card memory. Those using either 8 or 16 mega-pixel cameras will need proportionately more. I am normally afield with my 8MP 1D Mark II and 6-10 GBs of storage. (On my African trips, I travel with 16-20 cards stored separately in two digital wallets to avert disaster should I lose one…) During the rare spectacular photo session on a given morning or afternoon I may make 6 or 8GBs of 8 megapixel images with my EOS-1D Mark II camera bodies. When a card is filled with images (your camera will indicate "card full" to let you know that you have to switch cards), I place the card in my digital wallet with the back or white side up to let me know that the images on that card need to be downloaded. Cards that have been downloaded are placed Delkin side up and are oriented vertically. This tells me that that particular card needs to be formatted before use. Lastly, I know that cards that are Delkin side up and oriented horizontally have been formatted and are ready to use.

While it is possible to download your images directly from a camera to your (home) computer (by using a connecting cable), this method is quite slow and cumbersome; most folks find it much easier to download their digital images to either their home computer or to a laptop (the latter is pretty much a necessity when traveling) by using a card reader of some sort. There are two basic types. External card readers are designed to plug into a computer's USB or Firewire ports. There are a variety of options with these types of card readers (and ports) and download times are being reduced significantly as new technology is developed.

Card readers that insert directly into a laptop's PCMCIA slot are less expensive, more elegant, and extremely reliable. Before the introduction of Delkin's CardBus 32 Adapter, PCMCIA card readers were considerably slower than the external card readers, but the new technology used with these readers has changed that. The download time for a full 1GB card is four to five minutes, even when my laptop is running only on battery. With the older PCMCIA card readers, the same downloads would take 16-20 minutes. (To order a Delkin CardBus 32 Adapter, visit: http://www.birdsasart.com/delkin.htm#Delkin%20CardBus%2032%20Adapter.

The image files on your laptop can then be transferred to your home computer at your convenience. (Do note that some digital photographers work entirely on a quality laptop with a high quality monitor.) When I travel, I back-up the keepers every night or two by copying them to a lightweight external hard drive, and when I get home the trip file is copied from the external hard drive to one of our home/office external hard drives. (We currently store our digital collection on three sets of external hard drives. Each set consists of three Maxtor 300GB One-Touch II drives. Two of the sets serve as backups, and one of these sets is stored off site.)

Once your images are safely transferred from your flash card to your laptop's (or to another computer's) hard drive, view the images once quickly to ensure that they have transferred successfully, are viewable, and are not corrupted. Only then is it time to reformat the card so that it can be used again (and again and again…). It is faster (and according to some digital experts, more reliable) to format the card in-camera rather than to delete the images from the card on your computer, and this is exactly what I do. When reformatting a card, it is vitally important to follow a strict routine in order to avoid deleting images that have ***not been downloaded.*** And it is best to format these cards in the comfort of your home or motel room ***before*** you head back out into the field. If you wait until you need a clean card to format one, you will often miss some spectacular opportunities as it takes about half a minute to click through the menu and clean the card.

Before reformatting a card, view the images on the card in-camera and do not continue unless you are completely certain that you have seen the images on your laptop. (The one time that I neglected to do so, I formatted a card that contained images of a just-hatched Snowy Egret chick sitting bolt upright in half-an-egg shell). Once in a great while, I insert a card to be formatted but notice that the images have not been downloaded. In these cases, a minor tragedy can be prevented.

One final note here: On rare occasions, we accidentally make a few ***new*** images on a card that has been used previously, has not been filled, and was not formatted. It would be possible to review the images on such a card in-camera, view only a few of the ***earlier batch of images*** made on that card, and then format the card thus losing the newer images that might not have been downloaded… To prevent this, be sure to view the first few ***and the last few*** images on a card before formatting it! With my Canon pro bodies, I do this by first pressing the display button and then holding down the select button while turning the thumb-wheel first clockwise and then counter-clockwise By doing this, you will view both the first and last few images on the card and, assuming that you recognize all of the images as ones that you have seen on your laptop, you can safely format the card.

File Management

Before you download a single image, you will need to have a basic filing system in place on your laptop. Here is the system that I used and recommended for the first two years of my digital life. Make a new folder on your laptop entitled "Digital Images." For folks new to computers, even the simple act of creating a folder can be a difficult task. As you will be making many folders and sub-folders (so that you can manage your digital image files), it pays to master this relatively simple skill right off the bat.

First, double left-click on My Computer. Then double left-click on the icon for the Local Disk (C :). To create a new folder, right-click anywhere on the screen, select New, and then select Folder. The text below the icon (it will say "New") will be highlighted. Now simply type the words "Digital Images" in the box. Then simply left-click anywhere on the screen and you will see your newly created Digital Images folder. Next, create a series of folders within the Digital Images folder entitled Day Take A, Day Take B, Day Take C, etc. You

will download the images from your compact flash cards into these folders; the images from a single card should be downloaded into a single folder. To create the folders, follow the directions above, this time right-clicking on the Digital Images icon each time. Now you will be ready to download images from your compact flash cards to your laptop.

To begin, either insert or plug a card reader into the appropriate slot on your computer. Next, insert your compact flash card into the card reader. Double left-click on My Computer. An icon representing the memory storage device with the images should appear on the screen. Double left-click on the icon until the folder or folders that contain the images comes up. If you click one time too many, the individual image files will begin to appear. If this happens, click the Back button. Now highlight the folder or folders by left-clicking first on one and then holding down the Control key while left-clicking on the others. Once the folder(s) are highlighted, keep the cursor on a highlighted file and then right-click. Left-click on Copy. Now hit the Back button twice to return to the My Computer screen. Double left-click on the Digital Images folder and then double left-click on the Day Take A folder to open it. Right-click anywhere on the screen and click on Paste. Downloading a full card may take more than a few minutes. Repeat this procedure for each flash card that you've used and you'll be ready to view your images and begin editing them. When using this rather cumbersome method the images from each card will be in a separate folder.

Downloader Pro (for PC only)—Too stubborn for too long?

In the mid 1980s, folks kept telling me, "You should get over to the Venice Rookery, it's amazing." But time after time I would respond, "Ding Darling is great. Why should I go all the way up there?" Then finally, I went... As it turns out, I should have listened, for the Venice Rookery (Nov. thru at least Feb.) is one of the premier bird photography hot spots in the world and is visited by nature photographers from around the globe. (On some Friday mornings there are more than 50 super-telephoto-equipped photographers there!) As most of you know, I made the cover image for *The Art of Bird Photography; The Complete Guide to Professional Field Techniques* at the rookery. I should have listened earlier. When Chris Breeze, the creator of the amazing BreezeBrowser program (that I use nearly every day of the year), told me to try Downloader Pro, I should have listened. But I didn't, and as a result I wasted hundreds of hours downloading my digital images as described above. I repeated that time-consuming procedure thousands of times during my first twenty months of digital photography. And even though I had the procedure down pat, it took a minute or more to laboriously copy and paste the images from a single card.

Now, with Downloader Pro, I put my flash card into the laptop and four seconds after the computer recognizes the card, the program opens automatically and prompts me to enter a job code—I type in the name of the location where the images were made and then hit OK. In less than a second, a list of the file numbers appears on the screen and a window pops up: Automation enabled. Do you wish to automatically: download images from your CF card then soft eject card reader media and then close Downloader? I click yes and Downloader Pro downloads the images into a predesignated file. Better yet, my copyright and contact information are embedded into each image as part of the IPTC data. (IPTC data is simply text that is embedded in an image file.) And better even yet, the location caption appears behind the file number for each image, like this: 279T2371 St. Augustine Alligator Farm, FL. Now, when we process an image, there is no need to type in the location as part of the caption; Downloader Pro has inserted the location automatically. And once you have typed the location for the first card of a photo session, there is no need to type it in again. It will appear as the default until you type in a new location.

When combined with the super-fast CardBus 32 Adapter (PC or MAC), the world's fastest PCMCIA CF card reader, the entire downloading process for a 640 e-film Pro Delkin Compact Flash Card takes less than three minutes. A full 1GB CF Card takes about four minutes. To order Downloader Pro (PC only: $29.95 US) now, visit: http://www.birdsasart.com/DownloaderPro.htm and then click on the Paypal link. To download a free trial version of Downloader Pro, click on the link on the page above. If you use a digital camera and a PC you are simply wasting lots of valuable time if you are not using

Downloader Pro. Do note that Downloader Pro has many additional features that may prove valuable to you. You do not need to use BreezeBrowser to benefit from using DL Pro.

Using DL PRO—Before you begin

The instructions below tell how I (with Chris Breeze's help via phone) set up my DL Pro to do exactly and only what I wanted and needed it to do:

1. Open automatically when a flash card is inserted into the Delkin BusCard/32 Adapter (card reader).
2. Prompt me to type in the location information indicating where the images on the card were created.
3. Add the location information to the name of the image file and place behind the camera file number.
4. Auto-embed my copyright, credit line, and contact information as part of the IPTC data.
5. Prompt me to download the images.
6. Download the images to a predesignated folder and place them in a sub-folder (named for the day and date that the images were made).
7. Safely "stop" the card and close DL Pro.

Do realize that I am only scratching the surface here as far as DL Pro's capabilities. If you would like DL Pro to do more for you, simply explore the help tutorials (and let me know if you come up with anything that is mega-useful to you).

Getting ready...

On your laptop's hard drive (C), create a file named "A A A Digital Images." The "A A A" ensures that this file will be the first file displayed when you double left-click on the C drive icon. Next, create a sub-folder named "A A A Downloaded Images." The "A A A" ensures that this folder will always be the first folder displayed when I double left-click on the "A A A Digital Images" icon.

Setting your DLPro Preferences

Open Downloader Pro and go to File/Preferences (or type Ctrl+P). Make sure that the download path tab is selected. Click on the three dots (...) next to the box below Download Directory; click through to select the folder to which you want the images downloaded (in my case, C:\A A A Digital Images\A A A Downloaded); then type \%b%D %y accurately. This will place your images in a sub-folder named with the month name, the day of the month, and then the 2-digit year. (You can customize the exact name and style of your sub-folder by choosing and typing from the symbol list.) Note: Be sure that the day, date, and time are set correctly on your digital camera body or bodies.

In the Filename box, type %o %J (with a lower case letter "o"). Be careful with the capitals and lower case letters and the spaces. In the job code box type %J with a capital "J." Be sure to check the box that says "Prompt for Job code every time Downloader is run."

Next, insert a CF card into a card reader that is attached to or inserted into your computer. Now click on the "General" tab and select "Auto-detect camera or card reader at startup," as your Image Source. Then click-check only the following boxes: Auto-rotate J-PEGs (loss-less rotation), Automatically Eject card reader media when disconnecting, and Add NAA/IPTC data every time Downloader is run. Then click OK. A list of the image files on the card should appear in the main window. Next click on the Automation tab. Check the following boxes: Enable Automation at startup, Prompt before starting auto sequence, Download files when application is started, "Soft eject" card reader media, and Exit Downloader. Then click OK. Lastly, click on Events/Register for AutoPlay Events. The first time that you insert a card to be downloaded, a dialogue box should appear asking what you want to do. Select Downloader Pro from the list and check the box that says "Always do the selected action."

Adding IPTC Data

Many photographers (especially professionals) wish to add their copyright and contact information to each image file. To do this, click on Edit/NAA/IPTC Data. At present, I enter my copyright, credit, and contact information in the boxes under the Credits/Status tab. (As there are no boxes for e-mail, web site, or phone number, I simply type this info into unused boxes.) Though I do not enter any additional info, you may wish to do so. Simply click Help/Getting Started/index/6.NAA/IPTC data/Editing IPTC data for detailed information on doing so.

Buff-bellied Hummingbird, female on nest, Raymondville, TX

Canon 180mm macro lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/3.5. Fill Flash w/Macro Twin Light.

It is imperative that great care be taken to ensure that valuable family-jewels-type images (like the one above) are transferred, optimized, backed up, and stored with great care. This bird was totally comfortable with our presence.

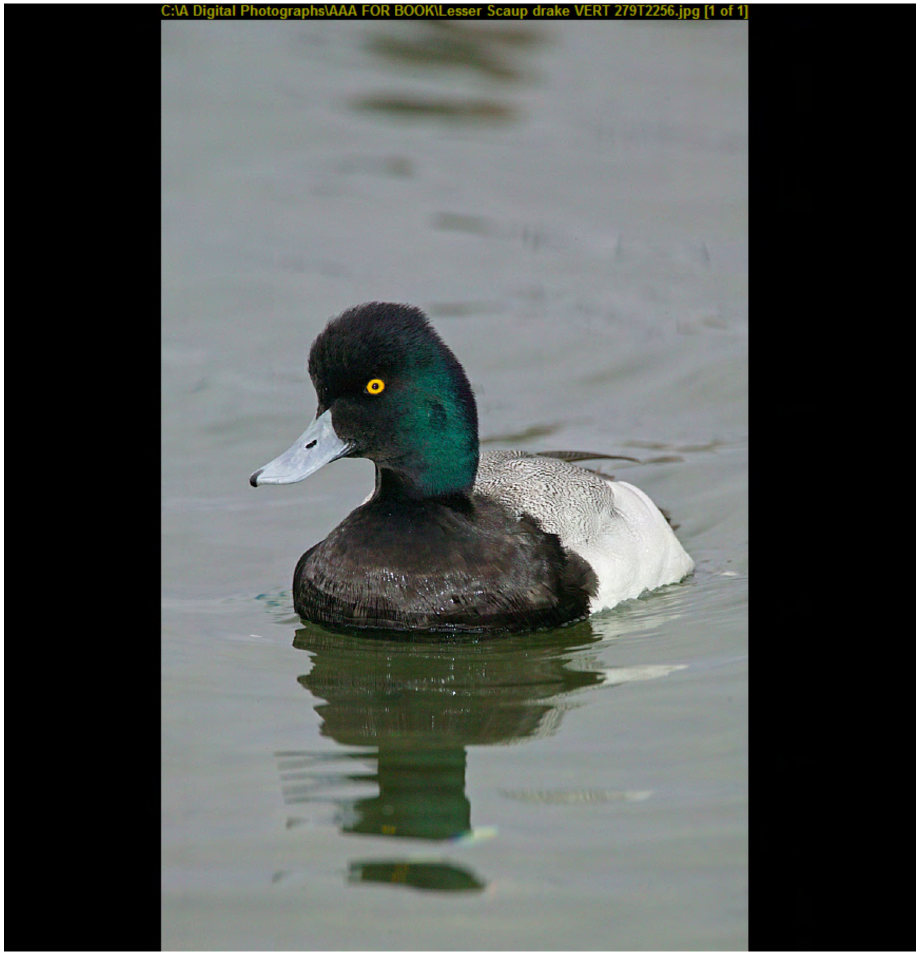
Auto downloading with Windows XP

If you are running Windows XP, you can set DL Pro up so that it launches automatically each time that a card is inserted into the card reader. To do this, first click on the Events menu item and then click on "Register for AutoPlay events." When the Downloader verification box pops up, click on OK. If you are running Windows XP and DLPro does not launch automatically when a card is inserted, try this: Go to My Computer, right click on the card reader drive, select properties, and then click on the AutoPlay tab. Select "Pictures" from the drop-down menu. Click on the "Select an Action to Perform" circle. Select DLPro (which should be listed as one of the applications). Then click OK. Good luck! Chris warns that Auto Start-up can be problematic at times even with Windows XP…

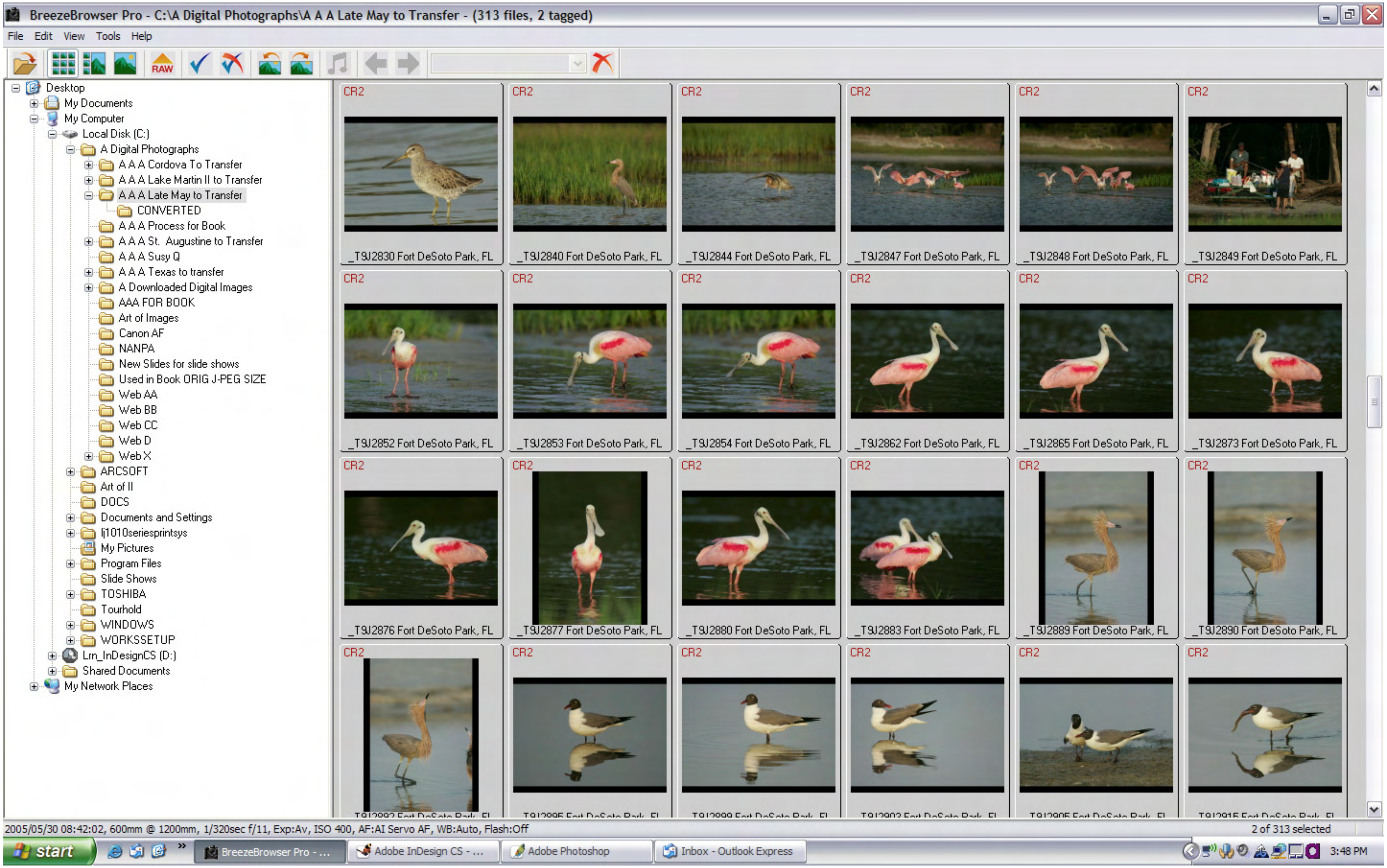
Editing in BreezeBrowser

BreezeBrowser is the file management/editing/conversion software program that I use and recommend for all PC users. It is not available for MAC-based platforms. BreezeBrowser converts the raw images from nearly all Canon, Nikon, Pentax, Minolta, and Olympus digital cameras. You can learn more about BreezeBrowser, download a trial copy, or purchase it here: http://www.birdsasart.com/BreezeBrowser.htm

To edit your images, open BreezeBrowser and double left-click on My Computer/Local Disk C/Digital Photos and the folder that contains your new images. Thumbnails of all the images in that file will appear. Clicking on View and then on Large Thumbnails (or hitting Control L) will—depending on the size of your monitor and the resolution that you have set—give you six to nine thumbnails in each row. You can enlarge an image and see the EXIF data by double left-clicking on it. To return to the smaller images, left-click on Thumbnails. I do, however, do all of my editing with BreezeBrowser's Slide Show Mode. If you wish to view all of the images in a folder in Slide Show Mode before beginning to edit, press Control A to select all and then press Control S/Control Q.



This is a screen capture of a BreezeBrowser slide show image. The black frame (the color is optional) makes viewing easier on the eyes. Though difficult to read here, the caption information, in yellow type at the top of the frame, is more than legible when you are viewing a slide show. The number of each sequenced image is pretty much all that I look at as I decide, "Keep #1 and #5 and delete the rest."



This is a screen capture showing 24 images as viewed with BreezeBrowser's large thumbnail view.

Pressing Control S (for Slide Show) begins a slide program of selected images. Pressing Control Q (for quality) sharpens the images and boosts the color saturation. The images that come out of most digital cameras are noticeably soft and exhibit flat, unsaturated colors. None of the changes made by pressing Control Q are permanent or affect the image file in any way. (Important Note: Digital images should ***never*** be sharpened and saved until they are sized for a specific use.) By pressing Control Q, the images that you see in the slide program will appear much sharper and with richer colors than the enlarged images that you see after double left-clicking on a thumbnail and will give you a rough idea of how each image will look after being optimized in Photoshop. Once the first image appears full screen in the slide show, right-click anywhere on the screen and then click on and set the Interval that you would like. I almost always use two seconds for editing.

Those who choose to first view the entire file as a slide program (once is usually enough) will have a good idea as to both the artistic and technical quality of each of the images and will then be ready to begin deleting. (I usually skip this step and get right to the editing; I strive to simply view each image on its own merits. I try to avoid keeping images that are the best in a series but do not measure up to my very high standards.) It is my very strong belief that the key to managing extensive collections of digital images is to edit ruthlessly. Keeping marginal images takes up valuable storage space. With five or six similar images, it is almost always best to keep only one or at most two images.

In any case, we are now ready to begin deleting. I usually work on one row of thumbnails at a time. To view the first row of slides I click on the first image, hold down the shift key, and then click on the last image in the row (or on the last image in a series that I wish to view). If you wish to select multiple similar images that are out of sequence, left-click on one, and then hold down the Control key while left-clicking on the others. (A gray border around an image indicates that it is selected.) Once you have selected a series of images to edit, hold down the Control Key and press S and Q.

If captions do not appear above your image, right click anywhere on the screen and then click on Show Caption (or simply hit Control C.) The captions will include a sequenced number (1 of 9, 2 of 9, etc) for the set of images being viewed. With a small number of images in a sequence, I find it easy to remember the numbers of the images that I wish to keep: “Keep 2 and 7.” If there are some close calls, I may need to go through the slide show sequence more than once. Hit the escape key to return to the thumbnails. All of the selected images will still be highlighted with a gray border. To ***un-select*** the images that I want to keep, I hold down the Control key, left-click on the second and the seventh images, and then hit the delete key. After clicking Yes or hitting the Y key, this will delete all of the images that were still selected. In this case all of the images in the sequence except for numbers 2 and 7 will be deleted, and they will now be the first two images in the file.

I continue in this manner until I have made my way through the entire file. When I am finished I will usually view all the keepers as a slide program and often wind up deleting a few more images along the way. When doing this re-editing I will, of course, wish to keep ***most*** of the images in a given sequence and usually opt to select only those images that I wish to ***delete*** (rather than un-selecting the images that I wish to keep). Click on the first image that you wish to delete, then hold down the Control key and select the other image or images that you wish to delete and hit the delete key. If you are at all unsure, run a slide show of the selected images to make sure that you are not mistakenly deleting any keepers!

It is inevitable that you will occasionally and inadvertently delete an image or a group of images that you wanted to keep (while keeping the images that you wanted to delete…). Not to worry. Open your computer’s Recycle Bin, highlight the images that you wish to retrieve, and then click on Restore the Selected Items. You can make it easier to find the images that you deleted accidentally by opening the Recycle Bin and clicking on View/Arrange By/Date Deleted. By doing this, the images that you deleted last will appear on the bottom of the screen. Highlight the images that you wish to restore and press the “Restore

Selected Items" button. When you return to BreezeBrowser, hit f5 to refresh the file. The missing images will reappear. From time to time while editing and when finished editing, you will want to empty the Recycle Bin. To do this, open the Recycle Bin and Click on Empty the Recycle Bin.

In Tanzania, I accidentally deleted the two best images ever made of Tawny-Flanked Prinnia and kept two inferior ones… I did not realize this until several days later after having emptied the recycle bin and formatted the flash card. This was the only time that I have ever done that. To prevent a recurrence, I now go back and re-highlight the images that I want to keep and double-check to make sure that I have ***kept the keepers!***

If you have used several flash cards on a given morning or afternoon, it is best to edit all the images before heading back into the field. When that task is finished, I move all of the keepers to a To Transfer folder in my Digital Images folder. First I create and name the Transfer folder by right-clicking on the Digital Images folder to create the new sub-folder. When I return home the To Transfer file is downloaded to an external hard drive. This hard drive is then reconnected to our main office computer and the images are then placed into species folders. Our collection is broken down into bird families (such as ducks, raptors, and passerines). These folders are broken down into species. The Ducks folder might for example contain folders for Canvasback, Mallard, and Pintail, Northern. We have additional folders such as Mammals, People, Photographers, Scenics, Suns and Moons, and Water. These folders are broken down further as needed. The image files in the current transfer file are then sorted and moved to the appropriate folders.

Converting Raw Images

When working with my Canon digital cameras I create my digital images as raw ***and*** J-PEG files. A raw file provides the largest possible image file with the most data and allows photographers to make exposure and white-balance adjustments during the conversion process. Images that are slightly over-exposed or grossly under-exposed can often be saved in this manner. The J-PEGs (which take up very little space) allow for almost instantaneous viewing in BreezeBrowser (and in some other editing programs as well). Note: When working with the EOS-1D Mark II, I create my images as raw files only because a decent sized J-PEG is created and embedded in the raw file when the image is made. If need be, see your camera manual to learn how to set up your camera to produce both raw and J-PEG files simultaneously. The raw images, however, must be converted before they can be viewed in a software program such as Photoshop.

Here is how to convert a raw file in BreezeBrowser. First, highlight the image that you wish to convert. Then click on Tools/Convert raw Image (or click Control K). The Convert Raw Image window will appear. Here are the Conversion Settings that I use: Conversion Method: Normal; Smart Noise Reduction: Low; White Balance: As Shot; Color Matrix: As Shot (which is always Adobe RGB); Contrast: As Shot (0). I check the Use this white balance for all images box and un-check the enable post-processing box. Here are the Output Settings that I use: Profile: AdobeRGB1998, Format: TIFF16-bit.

If the image appears too light or too dark on your calibrated monitor, click on Exposure comp: 0. The histogram for the selected image will appear. You can add or subtract light as needed by moving the slider. Though you will usually be making only small corrections—in the range of from two tenths to two-thirds of a stop—you can add or subtract up to 2 full stops of light. Keeping the Auto Preview box checked will allow you to see the lighter or darker version in a few seconds. When you are happy with the exposure, click OK. Making gross exposure corrections can result in excessive noise and color shifts. While many photographers try various White Balance settings prior to converting an image, that is something I almost never do. I adjust the color in Photoshop using a variety of methods described below. You can experiment here and see which of these approaches works best for you.

TIFFs are loss-less; you will not lose or damage any pixels when you work on the images and save them (as you would when working with J-PEGs) and TIFFs are presently compatible with virtually all software

programs. When I used Photoshop 7 (or earlier versions), I always worked with TIFFs in 8-bit Mode because many of the Photoshop operations that I used routinely were not supported when working in 16-bit Mode (which provides a larger file with more accurate color data and greater image detail). With Photoshop CS, I convert and work in 16-bit Mode. Almost all of the Photoshop operations that I perform are supported in 16-bit Mode. By working on the images in 16-bit, the adjustments that I make do not damage the image files. I do, however, flatten and convert to 8-bit Mode just before saving.

You can convert a group of selected images by first highlighting the images that you wish to convert and then clicking on Tools/Convert Image and then click on "Convert Selected." You will not be able to make Exposure or White Balance adjustments to individual images when doing so. When you have a large group of images that are pretty much right-on, Batch Converting can save you some time and allow you to work on other tasks as the images are being converted. Whether you convert images singly for greater control or in batches, the converted images are saved into a sub-folder created by BreezeBrowser. The sub-folder is aptly titled "CONVERTED." A + sign in a small box to the left of the folder title indicates that the folder contains a sub-folder. Double left-click on the folder to bring up the sub-folder and then left-click on the sub-folder to open it.

Opening Images in Photoshop

You can open up a converted image file in Photoshop by clicking on File/Open and then clicking on the downward facing triangle to the right of the Look In: box to bring up the drop-down list. Left-click on the correct Local Disc letter, and then double left-click on the Digital Images folder. The Digital Images folder will now appear in the Look In: box. Now double left-click on the folder that contains the converted images. Doing so will bring up all of the image files in that folder. The CONVERTED folder will be at the top of the list. Double left-click on the CONVERTED folder to open it. To view the thumbnails, click on the View box that is located to the right of the Look In: box. It is a small square with six colored dots inside. Left click on the View box and then left click on thumbnails.

An option is to click on the Photoshop File Browser and click your way through to the folder containing the image that you wish to open. A minor problem here is that both the J-PEGs and TIFFs will be displayed side by side. I find this much more cumbersome than opening the images directly from BreezeBrowser (see below). And while either of these methods become second nature after a while, it is far easier to take the time to set up BreezeBrowser so that you can right-click on an image in BreezeBrowser and have it open in Photoshop!

You will need to carefully set your BreezeBrowser preferences to make that happen. Here is how to do just that:

1. In BreezeBrowser, click on File/Preferences.
2. Click on the Editor Tab.
3. Click the button that says, "Use command line below."
4. Below that will be a window, click on the box with the three dots to the right of that window.
5. Double click and open on each of the following: Program Files. Adobe. Photoshop CS.
6. Then double click on the Photoshop icon. The following will appear in the window: C; \Program Files\Adobe\PhotoshopCS\Photoshop.exe
7. Then click OK

You will now need to set the BreezeBrowser color profiles for each of your digital cameras:

1. Click on File/Preferences/RAW Conversion.
2. Make sure that the top two boxes are checked.
3. Select your camera model.
4. Check Auto embed AdobeRGB profile
5. Make sure the two bottom boxes are checked.
6. Click on the box with the three dots next to the checked box that reads Embed color profile in images for normal conversion.
7. Then double click to open each of the following: Local disk C. Windows. System 32. Spool. Drivers. Color. And finally, double click on Adobe RGB 1998. AdobeRGB1998 should now appear in the window. (Note: The above steps will work for Windows XP users. Those with early operating systems will need to do a search for the AdobeRGB1998 file.)

all: Western Sandpipers, Cordova, AK

Even though I edit ruthlessly, I often have large numbers of family-jewels-type images to optimize, especially when I am traveling. It is, therefore, extremely important to me to be able to process images quickly and efficiently.

8. Now repeat steps 6 and 7 for the lower window that says Embed color profile in images for linear raw conversion. When you are done, AdobeRGB1998 should now appear in the bottom window.
9. Click OK.
10. If you own more than one type of camera, repeat steps 1 through 8, selecting your second camera body in Step 3. (Everything else should come up as the default settings).

To open a converted image file in BreezeBrowser, right-click on the image thumbnail and then select Edit from the drop-down menu. In about 30 seconds (or less if Photoshop is already open), your TIFF image file will open in Photoshop.

To convert a raw file and have the newly converted image file open in Photoshop, right-click on the thumbnail, select Edit from the drop-down menu, and follow the conversion prompts. After the image has been converted, it will automatically open in Photoshop as above.

Photoshop Workflow for Optimizing Images

Before beginning work on an image, I open the following windows by click-checking them in the drop-down Windows menu: Tools, Options History, Info, and Layers. The Tools palette is kept on the left side of the monitor. The other windows are kept on the right side of the monitor as follows from top to bottom: History, Info, and Layers. Click on the blue border of each window to drag it around on the screen. The box that contains History will also have a tab for Actions. This layout is more than a bit tight on my laptop, but at home there is lots of room on my 23-inch Apple Display monitor.

DIGITAL WORKFLOW

1. Make images in-camera utilizing raw mode and making sure that a J-PEG is either added or embedded.
2. Download image files to my Toshiba Satellite laptop via the Delkin high speed CardBus 32 Adapter. The files—with apologies to Ms. Manners—are often downloaded and reviewed at lunch and dinner.
3. The new images are tightly edited and the selects are moved (Control A, Control V) to a folder entitled AAA To Transfer. I strive to have all of a day's images edited before I get to sleep, as things can really mount up if you get behind.
4. When I am finished editing the images from a given day, I re-edit all of the images in the AAA to Transfer folder even more stringently. If traveling, I repeat this process several times during and then again at the end of the trip.
5. Once I am back in my home office, the keepers are transferred to an external hard drive that is then reconnected to our office computer.
6. In BreezeBrowser, I sort the images by species or category and place them into the appropriate folder on one of the two external hard drives.
7. Each week, or more often as needed, I back up the external hard drives (onto another set of external hard drives). A third set of back-up external hard drives is kept off site and updated weekly. Once the files are backed up in triplicate, I delete the contents of the AAA to Transfer folder from my laptop.
8. Selected images that have not yet been optimized are then processed in Photoshop CS as follows:

a. Highlight (select) an image in BreezeBrowser and convert the raw file in 16-bit. I sometimes change the exposure during the conversion process but almost never change the White Balance settings. My preferences are set so that the TIFF can then be opened automatically in Photoshop.
b. Create a background copy. (Note: Many Photoshop experts advise creating an empty layer for doing cropping, cloning, and dust spotting. To do this, click on the symbol to the left of the garbage can icon in the Layers box and then click-check the Use All Layers box just left of center on the upper tool bar. This approach opens up too many cans of worms for me and since I flatten all images before saving, this method does not offer any advantages.)
c. Crop, clone, and dust spot on the background copy (or on the empty layer as above).
d. Make Shadow-Highlight Adjustments on all images except those that consist of overall light tones.
e. Create a Levels adjustment layer and do the Levels adjustment.
f. Create a Curves adjustment layer and do a Curves adjustment

for images that need additional contrast.

g. Create a Hue/Saturation adjustment layer and boost the Master Saturation 6-8 points and, in some cases, boost or reduce the Saturation for selected individual color channels as well.
h. Create a Selective Color adjustment layer and make adjustments as desired.
i. Use an action to flatten the image and convert it to 8-bit. This saves a great deal of storage space.
j. Click on Save As. Press "Home" to move the cursor to the front of the file number created by the camera and type a label that always includes the species name first and an identifying comment. Example: "Brown Pelican head throw white BKGR 279T4301 LaJolla CA." (Note that the location has been added automatically by Downloader Pro.) BreezeBrowser automatically saves the file in a sub-folder entitled Converted.
k. After the image has been saved, hit the F2 key that is the Save for Web action. This automatically creates an e-mailable J-PEG, saves the J-PEG to our web folder, and closes the image. (See below for details.)

Note 1: Additional Photoshop operations including but not limited to Color Balance and White Point adjustments and Selective Sharpening are performed as needed.
Note 2: As my laptop has a quality screen and a fast processor, I almost always process the very best images while on the road. Do note that many experts would frown upon this practice.

You may have noted that I strive to edit and re-edit very tightly. With digital, there is no reason at all to keep more than two similar images even if they are of high quality. (A second original does provide insurance against a corrupted file.) Otherwise, you are simply wasting storage space.

I often e-mail J-PEGs to clients or post them to a web page for review. Master files of selected images may then be sent on CD or posted to a web page where the client may download them. BAA sizes images for clients, but in most cases the client does the sharpening.

Cropping and Cloning

Open the converted file that you wish to work on using one of the methods described above. Then click on the blue Background box in the Layers window, drag it down, and place it atop the "Create a New Layer" icon (or work on an empty layer as described above). The Create a New Layer icon is the one next to the Garbage Can icon in the row of icons at the bottom of the Layers window. A "Background Copy" layer will appear above the Background layer and this layer will now be the one highlighted in blue. You are working on layers to prevent damaging the pixels in the original image. If the image requires cropping, select the Crop Tool from the toolbox by left-clicking on it. The cursor will appear as the crop tool symbol. Place it near the corner of the image on the spot you would like to start, click and drag the cropping frame as desired and then release the cursor. Don't worry if you are off a bit; you can grab any of the frame edges and move them in or out, up or down. When you have achieved the crop that you want, there are three options: you can click on Image/Crop, simply click on the check mark that will appear just to the right of center on the Tool Options Bar, or double left-click on the image.

The next step is to remove dust spots. These result from tiny particles of dust that find their way onto the camera's sensor. In the image, they will appear as small usually circular spots and are most visible against light-colored backgrounds like sky. It is best to use the Healing Brush rather than the Clone Tool to remove most dust spots, especially those set against clean backgrounds. At times I use the Clone Tool because it is so much faster. ***Before using either the Healing Brush or the Clone Tool, be sure to click on the Brush Palette and set the Hardness to zero.*** This will ensure that all of your repairs will have soft edges. You will find the Brush Palette on the upper left side of the Tool Bar.

To use the Healing Brush, first left-click on the Band-Aid symbol on the Tools palette and make sure that the Healing Brush (not the Patch Tool) is selected by right-clicking on the Band-aid symbol. Learn to use the letter short-cut "j" to quickly choose the Healing Brush. As you move the cursor onto the image, the Healing Brush will appear as

a circle. If it does not, turn Caps Lock off. To make the circle larger, hit the right bracket key "]". To make it smaller, hit the left bracket key "[". Make the circle only slightly larger than the dust spot. If you wish to use the Clone Tool, first left-click on the rubber stamp symbol on the Tools palette and then make sure that the Clone Stamp Tool (not the Pattern Stamp Tool) is selected by right clicking on the rubber stamp symbol and then proceed as above.

To best detect dust spots, I hold down the Control Key and hit the + key four times; this usually enlarges the image to 100 percent. Then I grab the frame edge with the cursor and scroll through the image beginning in the upper right corner and ending in the lower left corner stopping along the way for each dust bunny or group of dust bunnies. To remove a dust spot, place the cursor (circle) next to the dust spot. While you can grab pixels from anywhere around the dust spot, it is best to choose an area that is of similar tonality to the area around the dust spot. Once the cursor (circle) is in place, first hit the Alternate (Alt) Key and then left-click to "grab" the pixels. Then center the cursor over the dust spot and left click. The dust spot will vanish. (If it does not, you are on a layer other than the background copy; click on Background Copy in the Layers Window if need be.) If you are working in layers as described here, and you note more dust spots later on, be sure to click back to the background and turn off the visibility of the other adjustment layers by clicking on each Eyeball symbol ***before*** trying to remove them. Be sure to turn the Eyeballs back on when you are finished. If you are preparing a family-jewels image for printing, you may wish to check for dust spots ***by enlarging the image*** to a greater degree than described above. Be warned that doing it this way can be quite time consuming.

Cloning is replacing an unwanted group of pixels in one part of an image with pixels from another part of an image. Cloning should be done on the Background Copy layer. Let's say that you wish to clone out a distracting black shell on an otherwise clean white sand beach. (Note: Using the Clone Tool is very similar to using the Healing Brush as described above.) First left-click on the Clone Stamp tool (the rubber stamp symbol) on the tools palette window and then right-click on the symbol to ensure that Clone Stamp, not the Pattern Stamp, is selected). It is easier to learn and use the letter short cuts, in this case "S." As you move the cursor onto the image it should appear as a circle. Again, to make the circle larger, hit the right bracket key "]". To make it smaller, hit the left bracket key "[". If the circle is not visible, check first to make sure that Caps Lock is off. If Caps Lock is on, turn it off as Caps Lock on makes the clone stamp appear as a tiny "x." If Caps Lock ***is*** off and you still do not see the clone stamp circle, try using the bracket keys above to make it either small enough or large enough to see.

If the shell is a relatively small one, you can clone it out. Make the Clone Stamp circle a bit larger than the shell. Place the Clone Stamp circle on an area of beach next to the shell. Hold down the Alternate (Alt) Key and then left-click to "grab" the pixels that you want. Next, place the cursor atop shell and left click. The shell will disappear and magically become beach. (You may have to click several times.) Do understand that I have no ethical problem at all with using the Clone Tool to remove small but distracting background elements or spectral highlights. Unless you have practiced a lot and are fairly skilled, it can be difficult to remove a larger object—such as an unwanted bird—from the background, this even when working against relatively clean backgrounds. It often helps to go over cloned areas with the Healing Brush to restore texture to the cloned area and make it look more natural (and less lumpy). Lastly, you can rework such areas with the Clone Tool after reducing the opacity to about 50 percent. After making sure that the Clone Tool has been selected, Click on the triangle next to the 100 percent that appears to the right of the Opacity Box. Move the slider to the left to reduce the opacity.

After Ellen Anon performed magic on a spectacular Oystercatcher flight image of mine by removing a second Oystercatcher from the bottom of the frame (without leaving a trace), I asked her to teach me her "Careful Cloning Techniques" for eliminating large objects and she did just that. First, enlarge the image a bit by hitting Control + (plus) a few times. Then size the Clone Stamp so that the diameter is about 1/4 (or less) of the width of the large object that you wish to clone out. Begin cloning by selecting background pixels from an area to the top right of the object, and then placing the Clone Stamp circle

(above): close-up of toes

American Oystercatcher landing
Fort DeSoto Park
St. Petersburg, FL
(above): converted raw file
(right, below) optimized master file

Canon 400mm f/5.6L lens (handheld) with Canon EOS 10D. ISO 200. Evaluative Metering -1/3 stop: 1/2000 at f/5.6 in Manual Mode.

After taking a close look at my first attempt (created more than two years ago), I realized that I needed to re-do this image. The new master file (right) is far superior to my initial effort. By making a careful selection of the toes and lower legs, selecting inverse, feathering the edges only one pixel (to keep the toenails well-defined), and cloning carefully as described in the text, it is possible to maintain fine detail even in areas that overlap (as the foreground bird's toes do with the back of the background bird).

atop the top right side of the object. Click and then release the Alt key and then drag the Clone Stamp downwards painting background over the object as you go. Now go to the top ***left*** side of the object and do the same thing. Alternate cloning from each side until the object is completely painted away. Hit Control – (minus) a few times and see how the clone job looks. If things appear lumpy or patterned, cloning more pixels from another similar area of the image can help, as can using the Healing Brush to replace lost texture, or using the Clone Tool at reduced opacity to smooth things over.

Shadow/Highlight in Photoshop CS

I had heard a lot about the Shadow/Highlight (S/H) feature in Photoshop CS before it was released, and when I first started using it I was most impressed. It was Ellen Anon (again…), however, who really opened my eyes to how to get the most out of this incredible feature. I use Shadow/Highlight routinely now to open up (reveal the detail in) the darker tones in an image and more rarely to tone down the lightest areas. At first, I used S-H towards the end of my workflow, but now I make these adjustments right after completing my cropping and cloning.

As you cannot open Shadow Highlight on its own adjustment layer, it is recommended that you do the work on the background copy. Click on Image/Adjustments/Shadow/Highlight. When the box opens, check the Show More Options box. An expanded window will open. First, enter “0” and “0” in the Black Clip and White Clip boxes at the bottom of the window. (Leaving the default values of 0.1 and 0.1 will result in significant clipping at both ends of the histogram.) Then click Save As Defaults. As you move the various sliders, you can and will see the changes that you are making on the image.

The Shadow-Amount slider tells how much you are lightening the image. Moving the Shadow-Amount slider to the right brightens the image thus revealing additional detail. The default value for Shadow-Amount is 50. With virtually almost all images, this makes them much too light. Since I often wind up working with the Shadows-Amount Value in the 10-15 range or even lower, I set 12 as the default. On very rare occasions, I wind up setting this value considerably higher.

The Tonal-Width slider allows you to choose which of the tones in an image will be lightened by your Shadows-Amount changes. If the tonal width slider is set at 50%, it means that your Shadows-Amount adjustments will affect the darkest half of the pixels in the image. If the tonal width slider is set at 100%, it means that your Shadow-Amount adjustments will affect all of the pixels in the image (except for the pixels at 0 (detail-less black) and those at 255 (detail-less white). I set the default value for Shadows-Tonal Value at 25 so that only the darkest 1/4 of the pixels will be lightened. I do of course make additional changes for various images.

Moving the Highlights-Amount slider to the right darkens the highlights. For the Highlights-Amount value I set the default at 1 and often wind up backing off to the default value of 0 when I wish to keep my whites truly white. With some really contrasty images (especially of black and white birds in full sun) I find that darkening the highlights by moving the Amount slider to somewhere in the 10-20 range can work well. In these instances check to see that you are not graying or muddying up your whites. The Highlight-Tonal Value slider indicates which portion of an image will be affected by the Highlights-Amount changes. With this slider set to 100, it means that your Highlight-Amount changes will affect all the pixels between 1 and 254. I set the default value here to 12.

The radius settings (which I rarely change from the default setting of 30) determine how far out (from the pixels that have been identified as needing lightening or darkening) that the lightening or darkening is going to go. In some ways you can think of it as the S/H adjustment being feathered or blended into the rest of the picture. If the radius is low the effect is more contained to a specific area of the image, whereas if it is higher, the effect bleeds farther out into the image. The only time that I change the radius settings is when I make unusually large adjustments.

When you do choose to make Shadow/Highlight adjustments, it pays to experiment with various combinations of adjustments and see which looks best. To see the changes that you have made, simply click and un-check the “Preview” box. When I work on an image in Shadow/

Topi at sunrise, Maasai Mara, Kenya.

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -2 stops: 1/4000 sec. at f/4.

Shadow/Highlight can be an amazing tool. Here, I needed to set a large radius in order to avoid a really funky look to the ridge lines...

Highlight, I first work on the Shadow adjustments and then on the Highlights adjustments. When I am happy with the way that the image looks, I click OK and close the window.

Levels Adjustments

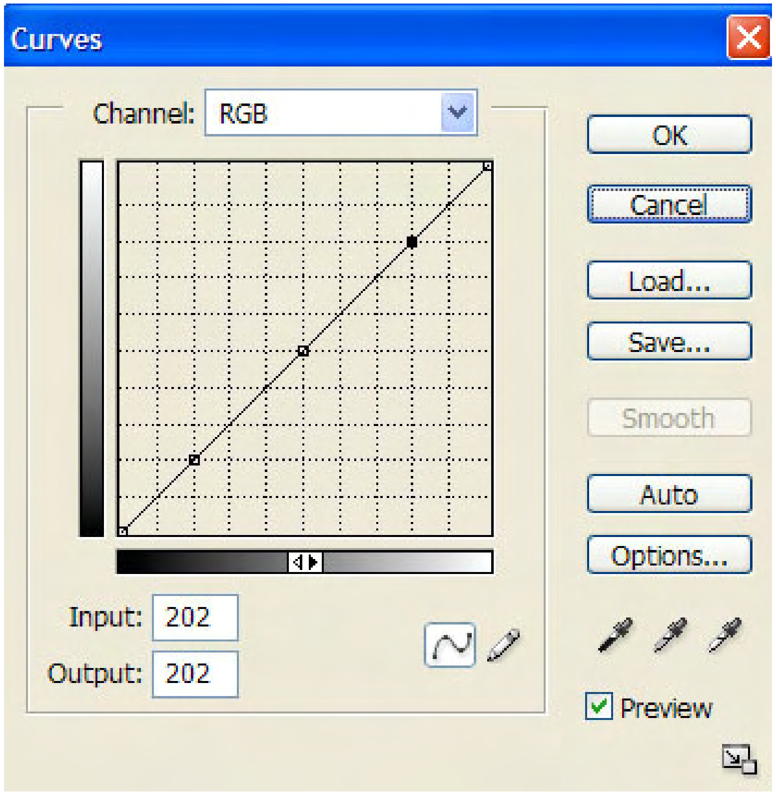
Next, I adjust contrast and brightness on a Levels Adjustment layer. Left-click on the Create New Fill or Adjustment layer icon that is next to the "Create a New Layer" icon (two to the left of the Garbage Can icon layer). This icon looks like a half-black/half-white cookie. Select Levels and a Levels window with a histogram will pop up. There are three sliders/triangles below the histogram. The right-most one represents the white point and the left-most one the black point. Adjust these to control contrast as follows: Click and hold the right-most slider while pressing and holding the Alt key. The image will change to all black. If you note some bright speckling at this point, it means there are overexposed, highlight pixels without detail. For most images, you'll most likely wish to start again by reconverting the image darker. In images containing specular highlights (such as water droplets reflecting bright sunlight) it is fine if such highlights are revealed as "overexposed." And with images of birds in flight on white sky days, the entire sky may be revealed as overexposed and without detail. This, too, is acceptable; in many cases, it is exactly what you want.

When—as there usually is—room between the data and the right-hand or highlight axis, slowly move the slider to the left while still holding down the Alt key. Notice when speckling begins to appear and at that point, back off just a bit until the speckling disappears. Next, click and hold the ***left-most*** slider while pressing and holding the Alt key. The image will change to pure white. If dark or black speckles are evident, you may wish to go back and reconvert the raw image this time ***adding*** light to the exposure (especially if you have some room on the right side of the histogram). In any case, move the black point slider to the right, backing off when the first ***black or dark speckles*** begin to appear on the ***all-white*** screen. With images made in really soft light, the image may look ***too*** contrasty at this point. If this is the case, simply back off on one or both sliders a bit. Lastly, move the middle slider to the right to brighten the image or to the left to darken it; this is done strictly by eye to your individual taste. (You can see the changes you have made by clicking and un-checking the preview box.) When the image looks good, click OK.

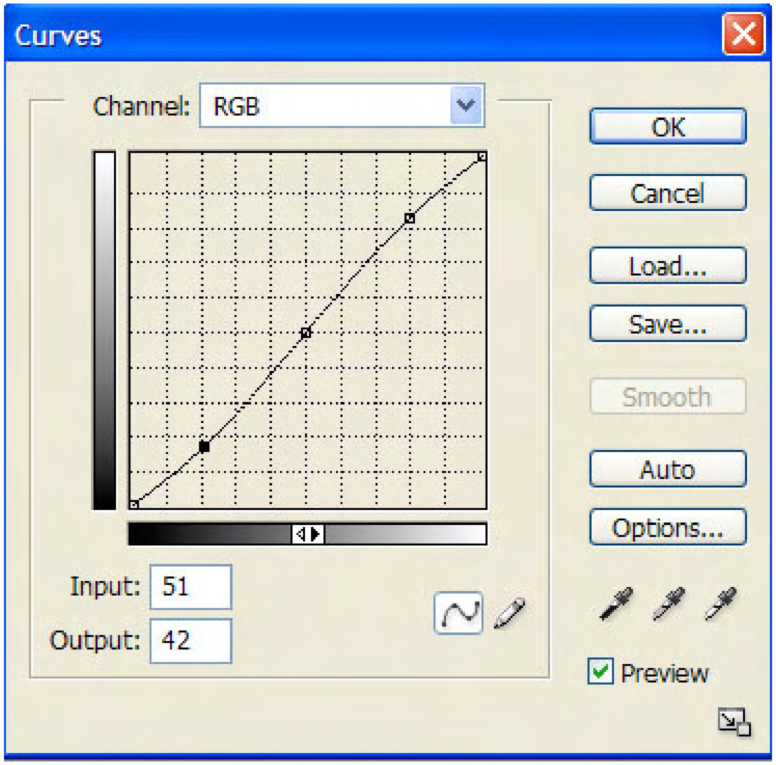
Curves Adjustments

It took me quite some time to begin using Curves and to become comfortable with the process. I tried and failed many times in my first two years of digital photography. Then I saw an article that simplified curves, consulted a few friends, and voila, I had it. For me, Curves is at its very best with low contrast images such as those made on cloudy or even foggy days. In a minute or two, image contrast can quickly and pleasingly be improved.

Click on the black and white cookie Adjustment Layers icon and then click on Curves. The Curves box will open. The default settings will reveal a curves grid with only sixteen boxes. Alt-click anywhere on the grid to create the desired 100 boxes. The diagonal line running from lower left to upper right indicates the tonal values of an image with the darks in the lower left and the highlights in the upper right. Begin by clicking and setting three points on the diagonal line like this:



To increase the contrast in an image, simply drag the lower point down a bit and drag the upper point up a bit so that you have produced a gentle S-curve like this:



As I do most of my processing on a laptop, one of the problems that I had with curves was that because using the touch pad was a challenge, I was too heavy-handed when attempting to make a curves adjustment. A friend showed me that once you are ready to drag a point up or down (or make any other numerical adjustment in Photoshop), you can do so by using the up and down arrows keys to increase or decrease the values. This revelation enabled me to make the very small curves adjustments with pinpoint accuracy. To decrease contrast in an image, pull the lower point up and the upper point down. Curves always seemed extremely complex to me but by using the simple approach outlined above and experimenting with it I have begun to explore other possibilities.

Hue/Saturation Adjustments

The images produced by most digital camera bodies feature somewhat unsaturated (read "boring") colors, so I almost always boost the saturation 6-8 or 12 points at most. To do this, click again on the black and white cookie icon, this time selecting Hue/Saturation. Move the Saturation slider to the right to boost the color. Increasing the color saturation by more than 12 points or so is generally to be avoided as the brighter colors may lose detail and begin to look artificial. At times, you may wish to increase or decrease the saturation of only a single color. To do this, click on the downward-pointing arrow in the edit box, click on the color that you wish to boost, and then proceed as above. When you are finished, click OK. I often work on the blue channel when attempting to adjust sky color. I made some cardinal images in Texas that looked totally oversaturated so I decreased the saturation of the red channel and the images looked great.

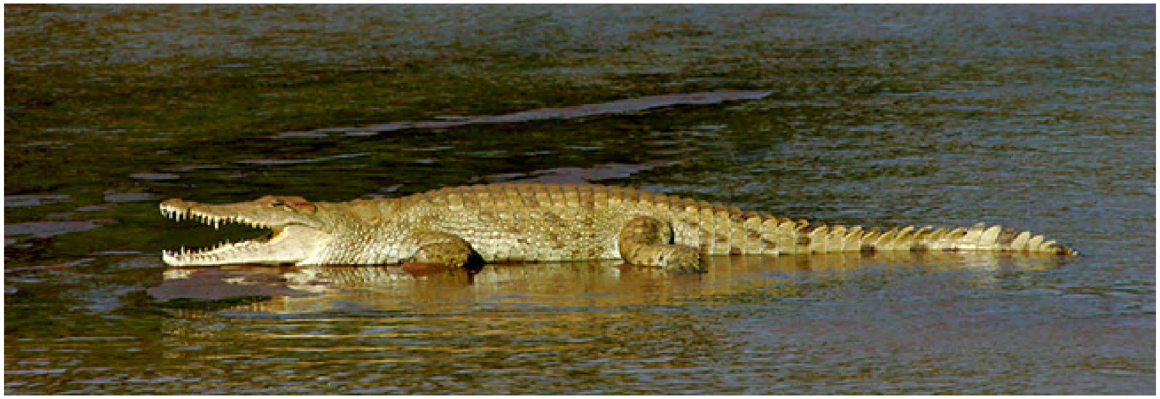
Selective Color Adjustments

Thanks (again) here to both Ellen Anon and Todd Gustafson who opened my eyes to the benefits of using Selective Color Adjustments to improve most images. In July of 2004 I knew nothing about Selective Color. By early September 2004, I find that I am using this powerful tool on virtually every image that I process. To open the Selective Color Options window, click on the Create New Fill or adjustment layer icon and then on Selective Color. For most images, I boost the blacks in both the neutrals and the blacks by 2 points to pleasingly increase the contrast and give the image more punch. To do this, first select Neutrals from the drop-down menu in the Colors window and then move the black (bottom) slider to the right 2 points. Clicking the Preview box off and on will let you see the changes that you have made. Next, do the same after selecting Blacks from the drop-down menu.

In addition to boosting the blacks in the Neutrals and in the Blacks, I have found many other ways to improve an image using Selective Color Adjustments. Here are a few examples: To tone

down bright whites, add black to the whites, and to brighten dingy whites, take black away. To make a blue sky darker, select blue and add black. To make it bluer, take away yellow (its opposite). To boost yellow, simply add yellow to the yellows. To remove a magenta cast from the whites, select white and then take away magenta (which is the same as adding green, magenta's opposite).   To make a zebra's stripes blacker, simply add black to the blacks. Feel free to experiment: you will learn by trial and error. Combining Hue/Saturation adjustments with Selective Color adjustments can yield spectacular improvements in an image as seen below. The image above right is (amazingly) the same photo as the one below after being optimized: cropping, cloning, shadow/highlight adjustment, levels adjustment, hue/saturation adjustment, and selective color adjustment. This image benefited especially from the selective color adjustments: I boosted the blacks in the neutrals, the blacks in the blacks, and the yellow in the yellows.

Crocodile/Samburu, Kenya. The image above is the converted raw file saved as a TIFF.



Crocodile/Samburu, Kenya. The image above is the optimized TIFF.

Color Balance Adjustments

Some images appear to have a colorcast, a faint shift towards magenta or towards cyan or towards blue, for example. Colorcasts are most readily noticed in the whites. If you do note a color shift, you can click on the half-black, half-white cookie icon again, this time selecting and clicking on Color Balance in the drop-down menu. If your image has a blue cast, move the blue slider a bit towards yellow; you will see the color changes in your image as you move the slider. If the image is too magenta, move the slider towards green, and so on. At times, you may need to move two or even all three of the sliders. Using this method with your carefully calibrated monitor, you are relying on how ***you*** perceive color.

From Tim Grey comes another way to reduce a colorcast, one that I now use regularly: Go to your Hue/Saturation layer, select the color channel for the bothersome color, and then simply move the saturation slider to the left to remove the colorcast by desaturating only that color. If your image, for example, has a magenta cast (as images from scanned film often do), go to your Hue/Saturation layer, select magenta from the drop-down menu, and then move that slider to the left to desaturate the magenta, thus removing the colorcast.

Setting the white and black points to correct a colorcast takes a bit more time, but the results are generally excellent and do not require that you have a great "eye" for color. The image, however, must contain at least small areas of both black and white. Open a new Levels Adjustment layer. Double left-click on the right-hand Eyedropper (which represents the white point). Doing so opens the Color Picker window. Place the cursor (which now is an Eyedropper) on the whites in the image,

moving it around slowly as you check the individual RGB values in the Info Window. If there is no colorcast present, you will note that the three values for white will be very close, something like R=237, G= 236, and B=237. (Do note that whites at 255 represent detail-less highlights.)

If there is, for example, a strong magenta colorcast, your white values might read something like this: R=241, B=221, G=195. To set the white point so that your whites are truly white, place the cursor on a spot that represents the values that you noted while moving the cursor around slowly. Leave the cursor on that spot until further notice. In the Color Picker Window, the value for R will be highlighted in blue. Type over that number, placing the highest value in the info box, in this case, the 241 in the R box. Then hit the tab key. Now type 241 in the G box and hit the tab key again. Then type 241 in the B box, hit tab, and then hit enter (all the while having left the cursor at the original location). Now, without moving it, left click on the cursor. Your whites should now appear bright and clean and very white. Now that you have adjusted the white point, it is time to set the black point in similar fashion. Open the Color Picker Window again, but this time by double clicking on the left-hand Eyedropper (which represents the black point). Place the cursor on an area of solid black and move it around slowly noting the RGB values in the Info Window. Again, pick a representative spot and leave the cursor right there. Let's say that you've come up with R=20, G=13, B=9. Now type the lowest number (9) into the R box and then hit tab. Do the same in the G box, and then type 9 in the B box, hit tab, and then hit enter. Now, with the cursor in its original position, left click to set the black point. Your image should now exhibit pretty close to perfect color balance as setting the white and the black points as we have done removes the cast from all colors if done properly. Now hit OK in the Levels window. When it asks you "Save the new target colors as default?" click No. (A special thanks here to Matt Haggadorn who first shared this technique with many on-line nature photographers including me!)

With images that do not feature any pure whites or pure blacks, you can make a gray point adjustment by following the instructions above after clicking on the middle Eyedropper in the Levels Adjustment box.

Note: Images made just after sunrise or just before sunset will have a warm (reddish or yellowish) color cast. If you "correct" this colorcast via a white point adjustment, your image will likely look as if it were taken at 10 a.m. Oftentimes, I will only partially correct a severe colorcast to ensure that the new version does not appear drastically different from the original. If I had an image with the whites at R= 240, G = 220, and B = 200, I might do a white point adjustment but change the G value to 230 and the B value to 220. As always, it pays to experiment and try a variety of approaches.

A Quickie Levels/Color Balance Trick

Thanks again to Ellen Anon for passing along this tip from Lewis Kemper. It allows you to do the levels and color balance work in less than a minute with very few keystrokes. After opening your image and doing the cropping and cloning on a Background Copy, open a Levels Adjustment Layer box (as above) and then click on Options. The Auto Color Correction window will open. Change the values in the two Clip boxes to zero and then check the Save as Defaults box. This will pinch in the light and dark sliders automatically thus increasing the contrast. Now click on each of the three algorithms and note the changes in color. Next, check the Snap Neutral Mid-tones box and click on each algorithm, again noting the differences in color. Sometimes the changes are subtle and sometimes they are dramatic. In either case, if you see one version that appeals to you, click on OK and then adjust brightness by moving the middle slider as needed.

If none of the versions appeal to you, there are two options. You may opt to start from scratch (it will have cost you less than a minute) and make your levels and color balance adjustments as above. Or, you can pick the version that you liked best and then either adjust the color balance or set the white and black points.

Creating and Working on Selected Areas

At times you may want to adjust or work on only a selected portion of an image. I do this in one of two ways: one involves using the Magic Wand Tool, the other the Lasso Tool. Below we shall look at a few examples.

Let's say that you have an image of a dark bird in flight and the exposure for the bird is perfect. Most likely the sky will look much lighter than it appeared when the image was made. You would like to darken the sky without making the bird darker. To do this, it is best to use the Magic Wand Tool to select the background. (Do understand that selecting the background is pretty much an option only when the background is relatively uniform and there is contrast between the subject and the background.) First, click on the Magic Wand Tool symbol on the tool palette (it's the one that looks sort of like a Fourth of July sparkler). Next, check to see that the number 30 appears in the Tolerance window (which is on the Tool Options Bar). Place the cursor (which will look like a sparkler) anywhere on the background and left-click. A rolling dotted line will appear around the selected portion of the image. Check to make sure that no part of the ***subject*** was selected. If this happens, left-click twice anywhere on the background to start again, this time typing a smaller number, say 25, in the Tolerance window. (Repeat if necessary, lowering the tolerance each time until only the background is selected.)

If you have a bird ***on a branch*** against a sky background, and you want to darken only the sky, you will first need to select one portion of the sky, say the part above the branch, and then select the portion of sky below the branch. To select an additional portion of an image without losing the initial selected area, hold down the shift key and then left click. Once the background is selected, you can darken (only) the sky by working on a new Levels adjustment layer (as described previously). Do realize that once you have made a selection, you could make Color Balance or Hue/Saturation adjustments (for example) simply by creating and working on the appropriate adjustment layer. The changes you make would of course affect only the selected area.

To make a selection disappear, click on Select/Deselect or press Control D. If you wish to do additional work on a selected area, click on Select/Reselect. If you might need to make an adjustment to a given area at some future time, you can make your initial selection and then click on Select/Save Selection. In the Name box of the Save Selection window, type a short name for the selected area; in the example above, "sky" would be the obvious choice. If at some future point in your work flow, you wish to work on the same area again, click on Select/Load Selection. The original selected area will appear again (defined by the rolling dotted line). You are now ready to make your next adjustment; it will of course affect only the selected area. You can repeat the procedure as many times as necessary.

When you're making an adjustment on a selected area, it is necessary to feather the edges so that the area you work on does not appear cut out. To do this, click on Select/Feather after you make your selection but before you make your adjustments. When working on large areas such as an entire bird, I set the feathering at 3 pixels. On smaller areas, such as a bird's head, I use 2 pixels. When working on really small areas, such as the eye of a bird, I set the feathering at 1 pixel.

When using the Magic Wand to make a selection is not feasible, the Magnetic Lasso Tool can often save the day, especially when selecting an area that is outlined with good contrast. When, for example, you have a bird with a dark head (or a dark eye-mask), and wish to lighten only that feature, you can use the Magnetic Lasso Tool to make your selection. First click on the Lasso Tool symbol in the Tools Palette, which, amazingly enough, looks like a lasso. Then right-click and select the Magnetic Lasso Tool. Before you begin, enlarge the image a bit. Now left click on the Alt key and draw a line around the head (or the eye patch) by guiding the magnetic lasso with your mouse. (The lower tip of the tiny strand just below the knot is the "pen".) You must place the cursor on the exact spot where you began before you release the cursor or you may become hopelessly snarled! Once you have encircled the feature, you can feather it and then make the adjustment that you wish, in this case, a levels adjustment that will lighten only the selected area.

Dodging and Burning

When I tell folks that I had been doing Photoshop seriously for nearly three years before I learned to dodge and burn digitally, they are amazed. I guess that never having been in a wet darkroom is in part responsible for that. I only use Dodge or Burn on perhaps one image in ten, but when I do use it the improvements to the image are always significant. Using the Dodge Tool lightens, Using the Burn Tool

darkens. (That seems counter intuitive to me, so I remember them by thinking the opposite of dodge = darken... In other words, dodging equals lighten, burning equals darken).

If you have a portion of an image that needs to be lightened or darkened while everything else stays the same, think Dodge or Burn. I do all of my Dodging and Burning on my Background Copy. It often happens that the area that I wish to darken is surrounded by darker areas of similar tonality. In these cases, I simply choose the Burn Tool, make sure that the brush hardness is set to zero, and set the brush size using the left and right bracket keys. Next, in the Range Box on the Tool Bar, select Shadows, Midtones, or Highlights. The next box on the Tool Bar is Exposure. I usually keep this set at 10% so that the changes I make are gradual rather than abrupt. Once you are good to go, simply place the cursor over the area you wish to darken, hold down the Alternate Key, and paint over the area with your cursor. You will see the changes as you paint.

To darken something that is surrounded by lighter areas, select the object to be darkened so that the burning does not affect the lighter background. For dodging, that is lightening, I generally use the same strategies that I do for burning (with a bit of reversed thinking)... If you do all of your dodging or burning in one fell swoop while holding down the Alternate Key and you overdo it a bit, there is an easy way to get the exact amount of change that you want. Simply go to Edit/Fade Dodge (or Burn) Tool. When the Fade dialogue box opens, move the slider to the left to reduce the amount of lightening or darkening. Waiting for just a moment will let you see the changes that you have made. Dodging and Burning are powerful tools and I am glad that I finally added them to my Photoshop arsenal.

Finishing Up

With most images, I am pretty much finished at this point. As storage space is a huge issue with large collections, I use an action to flatten my images and convert them to 8-bit mode before saving them. I click File/Save As, hit Home, and type the caption in the File Name box. I use the shortcut (Shift/Control/S) and then tap the Home key while the action is running. When the action is finished playing, the Save As dialogue box pops up with the cursor already at the front of the caption box. I simply type in the caption and then click Save.

I leave the file number as part of the caption so that we can locate the raw or converted file if need be. The name of the location, which was inserted automatically by Downloader Pro, follows the file number. If you are new to this, check to see that you are saving the TIFF to the correct directory. After you click Save, a TIFF Options window will appear. I choose None as some of the stock agencies that I deal with and many slide programs do not accept images with LZW compressions. Lastly, to save your optimized master file, click OK in the TIFF Options Window.

Important Note: Folks who may wish to make additional changes to an image prior to printing should save their images as un-flattened 16 bit TIFFs. They will then be able to reopen the image and make adjustments as needed on this layer or that without having to start from scratch.

Sharpening

Just about every image created with a digital camera needs to be sharpened to some degree. (Do note that images from scanned film usually require more sharpening than digital originals). All digital image files should undergo final sharpening ***only after they have been sized for a final and specific use.*** Larger files need much more sharpening than smaller ones. All such sharpening should, of course, be done at the desired output resolution. (Folks who reproduce the same print at the same size over and over again should of course save a sharpened version labeled as such.) Our master files are never sharpened.

Some digital experts feel that because all digital SLRs use anti-aliasing filters that render all images slightly soft as they come out of the camera the very first thing you should do when opening a new image is to apply a very modest sharpening such as 200/0.3/2. Still others set a small amount of in-camera sharpening for the same reason. At BIRDS AS ART we do not do any sharpening until an image is sized for final use. All of our master files are unsharpened. (Note: I often do selective

sharpening on selected areas of master files as needed, most often to the bird's eyes or head.) Unsharp Mask settings for 40-45MB layered 16-bit files range from 250/.25/0 to 475/.4/0.

For small J-PEG files to be used electronically, I generally sharpen three times using Filter/Sharpen/Unsharp Mask with the following settings: Amount: 125 percent; Radius: 0.2 pixels; Threshold: 0 levels. Some folks prefer sharpening once at 350/0.2/0. As file size increases (generally for images that are to be printed in one form or another), there are two options. You may decide to increase the Amount to somewhere between 300 and 500 while keeping the radius approximately the same. (In this case, you may need to sharpen more than once while decreasing the amount each time). Or you may increase the Radius to somewhere in the range of 0.85 and 1.25 while keeping the Amount roughly the same.

For natural history images, the threshold is usually set at 0 to yield the most detail. For portraits of people, the threshold might be set as high as 4-8 so that skin imperfections are not emphasized. For natural history images made at high ISO settings or those with large areas of sky, threshold settings of from 2 to 3 may yield the best results. If you ask a hundred good digital photographers exactly how they best sharpen their images, you would probably get a hundred totally different answers. To attain the very best results, experiment with each image by trying a range of sharpening settings and comparing the results. (Special thanks here are again due Ellen Anon, a master digital printer and Photoshop expert, who shared her sharpening techniques with me.)

Saving for Web

The need for small, easily e-mailable and loadable images is great. I often e-mail images to potential buyers as well as to friends, and I participate in two on-line nature photography sites, NatureScapes.net and PhotoMigrations.com. For years, I made these images too large—anywhere from 95-120 KB. At this size, small prints of decent quality can be made, but for folks who do not have a high-speed connection, they can take quite a while to transmit. Finally (with, as always, guidance from others), I began sending J-PEGs of 40KB or less and that has worked out extremely well. The images still look great, but they are far less useful if stolen and transmit much more quickly. With five of the larger-sized J-PEGs included, it used to take me more than eight hours to distribute a BIRDS AS ART/On-line Bulletin to 2,800+ folks using Group Mail Pro—we had only a dial-up connection at my home office in Indian Lake Estates, Florida. After changing to the smaller file-sized images, the same chore took well less than two hours. (With our DSL line it now takes less than an hour to send a Bulletin to 4,000+ folks…)

Here is how we prepare an image for web use: Open the master file. Click on Image/Mode/Convert to Profile. Adobe RGB (1998) should appear in the Source Space box. If sRGB does not appear in the Destination Space box, click on the arrow and select it from the drop-down list. (Note: There will be some code after the sRGB. If you notice that the image is in 16-bit, then click again on Image/Mode and check 8-bit.) Now click OK. Then click on Image/Image Size and change the resolution to 96 pixels per inch. After making sure that the Resample Image box is unchecked, click OK. Next, click on File/Automate/Fit Image. Enter 650 in both the Width and Height boxes. Click OK. (Doing it this way is simpler than sizing it via Image/Image Size as it handles both horizontals and verticals without a hassle.) Then sharpen the image for web use as described above (for small J-PEG files to be used electronically…). Some digital images might need only two sharpening passes, others four. Film images generally require three to six rounds of sharpening. Next, click on File/Save for Web. Make sure that J-PEG is selected in the box below the word Settings. Click on the tiny right-pointing arrow above the word Optimized near the upper right corner of the Save for Web window and then click on Optimize to File Size. Enter the number 40 in the Desired File Size box, click OK, and then click Save. In the Save As Optimized box, make

sure that you click through to the desired location and folder and that "Images Only" appears in the Save As Type box. (If anyone can let me know how to set that as the default, I would be greatly appreciative—not even Tim Grey could help me with that one!) Note: I keep all of my small J-PEGs in a folder called Web D (there is no particular reason for choosing that name). If you get in the habit of saving all of your J-PEGs to the same folder, that folder should appear as the default.

If you have already named your image, that caption should appear in the File Name box. If not, simply type the name in that box. If HTML and Images appears in the Save as Type box, click on the arrow and select Images Only (*. jpg) from the drop-down menu. Click Save. To close the image, you can click on the lower little X in the upper right hand corner of the Photoshop screen or click File/Close. (Clicking on the larger upper X would close the program.) When you close the picture, a box will appear asking "Save changes … before closing?" Be sure to click "No" so that your master file remains intact.

Actions

At BIRDS AS ART we often find ourselves in a position to perform the same, time-consuming operations on numerous images day after day. To save time we have learned to prepare and execute Actions. Actions are a saved string of instructions; press a single key (or a keystroke combination) and the sequence of operations will be carried out quickly and automatically. I use a permanent saved Action almost every day to prepare images for the web and use another on occasion to prepare images for digital slide programs. In addition, I will often create an Action on the spot should I need to process a group of images to a given set of specs for a publisher. Here is exactly how to create an Action to be used to prepare an image file for digital projection. First, open the image in Photoshop CS. Next, click on the Actions tab that is usually adjacent to the History box tab. Then, click on the Create New Action icon that is located on the bottom of the window just to the left of the Garbage Can icon. The New Action Window will open. First, type a name for your action, perhaps "Slide Show J-PEGs" into the Name: box. Then arbitrarily choose a function key that will be used to initiate the action. Lastly, as a reminder, type the function key at the end of the name of the action. If you have chosen f5 for your Slide Show J-PEGs action, the text in the Name Box should read "Slide Show J-PEGs f5." Then click Record. (When you do this, the Begin Recording icon at the bottom of the window turns red, indicating that the operations that you perform will be recorded as part of the action.)

You are now ready to begin recording the various steps in your Action. We will consider a 16-bit image TIFF with layers as our starting point. First, click on Image/Mode/8-bit. Then click on Image/Image Size and change the resolution to 96 pixels per inch. After making sure that the Resample Image box is unchecked, click OK. Next, click on File/Automate/Fit Image. Enter 1028 in the Width box and 768 in the height box as that is the resolution of nearly all digital projectors at present. If you are working with a newer projector with higher resolution, you will wish to enter the correct numbers for that projector here. Then click on Image/Mode/Convert to Profile and select sRGB from the drop-down menu if it does not appear in the Destination Space Profile box. Note: With some master files all of the above operations may not be needed, but it does no harm to have them included in the Action in these cases.

Next we sharpen the image. With digital images to be used for digital projection we do three rounds of sharpening. The first round is at 100/.4/2.0. This is followed by two more rounds at 125/0.2/0. These generic settings usually do a great job with digital images; some scanned film images may require an additional round or two of sharpening after the fact. (If you have lots of scanned film images you may wish to create a separate action for those images with higher sharpening settings.) While it is true that a given image may look somewhat better with a bit more sharpening, the amount of time saved by using an action is considerable; I have never had an image that looked over-sharpened using the settings above.

Now click File/Save As and select J-PEG from the drop-down menu in the Format box. The original file name will appear in the File Name

box. Make sure that you have clicked through to the correct folder in the Save In window before clicking Save. (We save the images in a folder entitled "Slide Show J-PEGs.") The J-PEG Options window will appear. Selecting a value of 10 or 11 will yield a high quality image file. Next, click File/Close. A box should open and ask, "Save Changes to original file?" Click No as you do not want to change your master file. Lastly, you will need to click on the square to the left of the red circle on the bottom of the Actions window. This stops the recording of your steps and saves the action. Be sure to remember to end the recording or you will have to begin the whole process anew! (Been there, done that!) Now, when you have a finished master file ***that has been saved***, you can simply hit the f5 key and the processed file will be saved in your Slide Show J-PEGs folder in a few seconds!

Batch Processing

Let's say that you have a folder with 300 family-jewels images. Each is a master file ranging in size from 10 to 63 megabytes and you wish to have them all available for a slide program that you are assembling. Opening and running your Slide Show J-PEGs f5 Action on each of the images individually would take hours at best. Imagine that you could have Photoshop do all of that automatically. By learning to set up Batches, Photoshop can do just that in about 20 minutes while you are busy working at other tasks.

To have Photoshop perform an Action on a group of images, Click on File/Automate/Batch. When the Batch window opens, select the Action that you wish to have executed from the drop-down menu in the Action box. In our example, you would select "Slide Show J-PEGs f5." Next, select Folder from the drop-down menu in the Source box and then click on Choose. When the Browse for Folder window appears, choose the folder that contains the group of images that you wish to process. In our example, you would select "Family Jewels." (If you wish to work only on some of the images in a folder, you would need to select them and copy them to a new folder first.) Once you have highlighted the correct folder, click OK.

After making sure that Folder appears in the Destination box, Click on choose and when the Browse for Folder window pops up again, choose the Folder to which you want the images to be saved. In this case, it might be "Slide Show J-PEGs/Family Jewels." Click OK. The next step is extremely important and can be a bit confusing at times. Make sure that the Override Actions "Save As" Command box is checked. This ensures that the images will be saved to the folder that you have designated in the Batch commands and not to the folder specified in the Actions. To ensure that the batch runs smoothly and without interruption, check both the Suppress File Open Options Dialogs and the Suppress Color Profile Warnings boxes and select Log Errors to File in the Errors box. (You will need to type in a file name.)

After you click OK, each image will appear briefly on the Photoshop screen, as it opens and then closes after all of the operations that you specified have been performed. When no more images appear, your batch processing has been completed. Do check to make sure that the images in their final form have been saved to the specified folder. It is not difficult to encounter some problems here; at times I find the images in a folder other than the intended one.

Advanced Technique/Digital Eye Doctor

In *The Art of Bird Photography*, I wrote, "When viewing wildlife, or wildlife art, we tend to make immediate eye contact. Consequently, if a bird's eye is in sharp focus, it gives the photograph an impression of overall sharpness." While optimizing my bird photographs in Photoshop, I often have the chance to improve the look of a bird's eye or eyes and have developed a useful bag of tricks for doing just that. And doing so can add greatly to the drama and impact of an image.

In many cases, selectively sharpening the eye or eyes can substantially improve an image. To sharpen the eye in a master file, select the Zoom Tool (z) and then left-click to drag/draw a box around the eye. When you release the cursor, the eye will be enlarged and centered; you will not have to scroll around the image to find it. Next, select the eye using either the Lasso Tool or the

Magnetic Lasso Tool. (Sometimes I will select both the eye and a patch of sharply defined feathers surrounding the eye.) Feather the selection 1 pixel before sharpening to avoid the cookie-cutter look. Then select Filter/Sharpen/Unsharp Mask. I generally will sharpen (to taste) with an Amount of from 300 to 500 percent and a Radius of from .2 to (rarely) as much as .4 pixels with the Threshold set at 0 Levels. On average I work with these settings: 375, .25, and 0.

The same technique can be used to lighten or darken the eye and possibly the feathers of the face that surround the eye or eyes. Many birds have dark or black eye masks and some have black hoods. With these, it is often necessary to lighten the eye so that it becomes visible. At times you may wish to lighten the eye and the surrounding feathers. When optimizing images of birds with light or pastel lores (the area between the eye and the base of the bill) or patches of light-colored feathers around the eye, it is often helpful to darken these areas to intensify the color. To lighten or darken an area, simply use the Lasso Tool (as above) to select the area, then feather the selection; I use 1 pixel of feathering for an eye, 2 pixels when working with tracts of feathers. Lastly create a Levels Adjustment Layer and lighten or darken the selection by moving the middle slider. Alternatively, you can do this by making Selective Color adjustments.

When using flash to photograph birds, the eyes are often rendered quite funky… Red-eye and steel-eye (an odd-looking silvery crescent on the eye) were common when using flash with film, but with digital (which is more sensitive to flash than film was), the effects are both wider ranging and even more detrimental to the image. When examining a flashed bird's eye at high magnification, unnatural highlights and lightened and artificially colored (usually purplish) pupils are often revealed. Most folks simply ignore these problems but the fix takes only minutes. I always examine the eye closely by magnifying it greatly, again using a box drawn around the eye with the Zoom Tool to do so.

I will often use the Clone Tool to repair red-eye, purple-eye, steel-eye, and other unnatural highlights that may affect small or significant areas of the pupil. After making such repairs, however, the pupil, which should be black, often appears far too light. Simply select the pupil with the lasso tool, feather the selection 1 pixel, create a Hue/Saturation adjustment layer, and then reduce the Saturation as much as 100 percent. Next, click on Select/Reselect (Shift/Control/D) and feather the selection again. Now create a Selective Color Layer and add blacks to either the Neutrals or to the Blacks until the pupil is rendered a pleasing black. It often helps to compare the eye of a flashed bird with the eye of an un-flashed bird of the same species.

After my recent trip to Homer, Alaska, in the dead of winter (read "-5 degrees Fahrenheit!"), I found often that I needed to either lighten or darken the yellow iris of a Bald Eagle and to intensify the yellow as well. To select the iris only, first circle the iris with the Lasso Tool. When the Lasso Tool is selected, the symbol appears on the very left end of the tool bar. To the right of the box with the lasso symbol there are four other symbols. Click on the third symbol, "Subtract from selection." Now use the Lasso Tool to circle the pupil. This will ***remove*** the pupil from your previous selection, which included the iris ***and*** the pupil. The end result is that you now have only the iris selected. After feathering the selection 1 pixel, you can lighten or darken the iris as needed. If you wish to boost the color, you can reselect and refeather and then either work the yellow channel only in Hue/Saturation or add yellow (and possibly a point or two of black) to the Yellows in Selective Color. (Similarly, you can click on the "Add to selection" symbol, the second one in the series, when you want to work on both pupils or on both eyes.)

By carefully examining the eye or eyes of their subjects, repairing and improving the damaged areas, and then lightening or darkening them as needed, nature photographers can quickly and easily improve the impact and the quality of their images. With wildlife, the "eyes" have it!

Some New Workflow Tricks

Many images need to be leveled when opened in Photoshop. When I first began using Photoshop I, used the Image/Rotate Canvas command; I would guess at the amount of rotation that was needed and often needed to go back in the other direction. This was time consuming. I have since learned two simple ways to rotate the canvas accurately and fairly quickly. Do note that images with crooked horizons are not the only images that need to be corrected so that they are square to the world. Ducks swimming downhill or shorebirds running uphill are generally upsetting to the viewer.

Leveling With the Measure Tool

After you have opened an image, created a background copy, and noted that the image needs to be leveled, right click on the Eyedropper Tool and select the Measure Tool. Place the cursor exactly on the horizon on one side of the image then left-click and hold while dragging the line across the horizon (no need to be exact while dragging). Then place the cursor exactly on the horizon line on the opposite side of the image and release the cursor. Now click on Image/Rotate Canvas/Arbitrary. A dialogue box will appear with the necessary rotation and the correct direction. It might say .72 degrees clockwise or 1.15 degrees counterclockwise. Click OK and the image will be leveled automatically. Be patient as this may take a while with large files or slow computers. You will need to either crop or add canvas as needed once the rotation is complete.

Leveling With the Crop Tool

Another option when leveling an image is to use the Crop Tool. After you have opened the image and created a background layer, you must view the image "unframed" in order to use this option. If your image has an info bar at the top, simply click on the square symbol just to the left of the red X symbol on the right-hand side of the info bar. Then click on the Crop Tool symbol. If your workspace is crowded, hitting Control Minus (-) will reduce the size of the image and make things more manageable. Now crop the image approximately as you would like it. (It is OK if you crop so as to include the whole image.) Now move the cursor outside of the cropped area. The cursor will change to a small, double arrow symbol. Grab the small square on either the top or bottom marching ants border with the cursor and drag either the upper or lower edge to the vicinity of the crooked horizon. Move the cursor again to an area outside of the cropped area. By left-clicking and moving the cursor, you can rotate whichever edge you have chosen. By working carefully you can adjust the edge so that it is parallel to the horizon. Now grab the square in the center of the edge and pull that edge into a position that accurately reflects the crop you desire. (Note: You can drag the edge you are working with or any of the edges outside of the image if you wish to add canvas; you do not need to be rotating an image to do this.) Lastly double click on the image to execute the crop and rotation.

The Patch Tool

As with many of the tools in my Photoshop arsenal, I learned about the Patch Tool from an IPT participant during the Photoshop Live session that we conduct on the second day with each group. Once I learned how to use the patch tool (it is simple) I began using it for most of my cloning work. It is far faster then the Healing Brush and unlike the Clone Tool, it grabs (and blends) texture.

If you look at the fourth tool symbol down on the left-hand side of the Tool Bar, you will find that the Patch Tool is nestled with the Color Replacement Tool and the Healing Brush Tool with the latter being the default. To select the Patch Tool, right-click on the Healing Brush Tool and then select the Patch Tool. (Once the Patch Tool is selected, you can access it with the "J" shortcut.) Before you begin, make sure that the New Selection box is checked. You can find the New Selection box just to right of the Patch Tool Symbol on the left side of the Tool Options Bar. Be sure also that "Source" (just a bit to the right) is also selected.

Let's say that you have a small grayish out-of-focus bird that you wish to remove from an otherwise blue sky. To use the Patch Tool

to do this the first step is to left-click and draw a shape around the out-of-focus bird. The shape will actually be a selection defined by a marching ants border. Next, release the cursor and place it over the shape. (The cursor will have changed from a cross hairs to the shape of the patch-tool symbol.) Now click and drag the shape to an area of clear blue sky. As you drag, you will see the bird "disappear" as it is replaced by the blue sky or by whatever lies below the shape as you drag it around. Now release the cursor and the out-of-focus bird will be gone, replaced by the color and texture of the blue sky.

If the area that you are replacing is similar in tonality to the area that is replacing it, the replacement can almost always be completed successfully in a single step. If the area being replaced is significantly lighter or darker in tonality than the area that you have selected to replace it, you may need to repeat the patching several times. It is best to make a new selection each time. In some cases with extreme differences in tonalities, it is best to first use the Clone Tool to eliminate the unusually light or dark area and then use the Patch Tool to smooth things over. As I am still using Photoshop CS (which does not offer the Spot Healing Brush that is available in CS2), I often use the Patch Tool for my dust spotting. In addition, I find the Patch Tool amazingly effective at eliminating small displeasing or distracting areas from complex backgrounds. Eliminating such areas with the Clone Tool or the Healing Brush was always a difficult chore for me and I was rarely happy with the results. Here is a big time Thank You for Scott Bourne who showed me how to use the Patch Tool on a Bosque IPT in November of 2005.

Editing, Back-up, and Storage Updates

When I am photographing—whether at home, on day trips, or on extended trips—I strive to have each day's images edited before I hit the sack. When I am on a trip, it is even more important to keep up with the editing. If you get far behind, or worse yet, if you get home after a long trip with thousands of un-edited images, you will be facing a long, difficult, and tedious task. In order to keep up, I often edit at lunch and at dinner. When I come to a family-jewels-type image while I am editing, I usually optimize it on the spot right on my laptop. And when I am all caught up on a road trip, I will optimize additional favorites.

When I am finished editing a day's images, I transfer the keepers to a folder entitled something like "A A A To Transfer Bosque 05" or "A A A To Transfer DEC 05." Every night or so I back up the entire "To Transfer" folder to a Western Digital Passport 80GB portable hard drive. (This portable external hard drive is plug-and-play, is powered by the computer, and has proven to be extremely reliable.) Before heading home, I make sure to back up the entire "To Transfer" file onto the Passport. On the plane home after a trip, or before transferring a month's worth of images, I re-edit the "To Transfer" folder often deleting a few hundred additional images. And I do the same thing the day after I get home from a big trip. I strive to keep less than 20 percent of the images that I make.

By the time I am ready to copy a "To Transfer" folder to the office computer system, I will often have optimized most or all of my favorite images. As of early 2006 our entire image collection is stored on a set of three 300GB Maxtor One-Touch II external hard drives. No images are kept on the hard drive of our main office computer. Once a "To Transfer" folder is safely on one of the three 300GB hard drives, Jim backs up all three drives to a second set of three 300GB Maxtor One-Touch II external hard drives that had been stored in a fireproof safe in the garage. And at the end of each week, Jennifer brings a third set of three 300GB Maxtor One-Touch II external hard drives and Jim copies the entire collection to them. Jen's set is swapped with the garage set and we are good for another month. (The set of three drives attached to the main computer are never disconnected.) Once I am positive that a given "To Transfer" file has been backed up in triplicate, I delete it from both the hard drive of my laptop and from the Western Digital Passport 80GB portable hard drive. And I am ready for the next trip.

Northern Pintail, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/320 sec. at f/11.

Above all else, digital photography is about making good images. Greg Downing had stopped his car near the spot that I wanted at a little pond on the Marsh Loop. I hung out till he split and then waited for this drake pintail to swim through the beautiful reflections of a reddish bush...

The Digital Advantage Gallery

Great Crested Flycatcher, Point Pelee National Park, Leamington, Ontario, Canada

Canon 600mm f/4L IS lens, 2X II TC, and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/9. Fill Flash at -1 stop with BB.

Most digital cameras offer a multiplier effect of 1.3X, 1.5X, or 1.6X. The effective focal length of all lenses will be increased by 30, 50, or 60 percent respectively. This is obviously a huge advantage for most nature and wildlife photographers who are forever striving to get closer to their subjects.

Greater Scaup, drake in dreamy-blue water, Westchester Lagoon, Anchorage, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1000 sec. at f/5. Fill Flash with Better Beamer at -1 stop.

As far as coming up with perfect exposures image after image, digital is light-years ahead of film. Even the most experienced film photographer would have been put to the test in the situation above. With digital, you make one image, then check, interpret, and adjust (if necessary) the histogram and you are good to go. You can even check the effects of flash on the spot by reviewing the image on the camera's LCD.

Marbled Godwit with scapulars blowing, Fort DeSoto Park, Tierra Verde Key, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1 stop: 1/400 sec. at f/8.

This image shows that digital capture can yield superb results on cloudy days without the use of flash. Note the rich, accurate colors, the lack of shadows, the excellent feather detail, and the clean whites. Levels and Curves adjustments can be made to increase contrast.

both: Sandhill Crane, Indian Lake Estates, FL

(above): Canon 300mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/4.

(right); Canon 70-200mm f/2.8L IS lens (handheld at 135mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1600 sec. at f/4.

In action situations, digital gives photographers the freedom to make long series of images, and—though it is something that I rarely do—to hold the shutter button down in rapid-fire mode without worrying about the cost of film, shipping, and processing.

Florida's nonmigratory resident Sandhill Cranes can be very tame. They dance year round in the presence of their mates. I am fortunate that there are several breeding pairs by the lake that is just minutes from my office-home.

Northwestern Crow on snow, Nome, AK

Canon 300mm f/2.8L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2 stops off the snow: 1/640 sec. at f/2.8.

With digital, it is easy to reveal the detail in black feathers or fur, even in low-light situations.

Fish Crow in flight, Merritt Island NWR, Titusville, FL

Canon 400mm f/5.6L lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/1250 sec. at f/8.

Had I been using film, I would never—for many reasons—have pushed the shutter button on this one...

Red-necked Grebe, Westchester Lagoon, Anchorage, AK

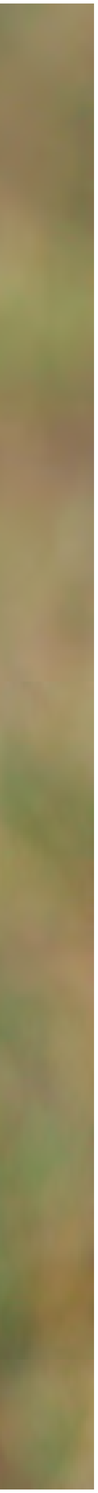
Canon 500mm f/4L IS lens with EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/60 at f/11 set manually. Fill Flash with BB at -1 stop.

When the background tonality changes from moment to moment, it is best to set the correct exposure for the subject manually so that you will not have to make big exposure compensation changes each time that the background changes. This works well with film and digital, but the huge advantage here again goes to digital as you can first confirm the correct exposure for the subject by checking the histogram and then set it manually.

Red-necked Grebe, Westchester Lagoon, Anchorage, AK

Canon 500mm f/4L IS lens with EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/60 at f/11 set manually. Fill Flash with BB at -1 stop.

In the image on the facing page, -1/3 stop would most likely have been correct. The image above would have required +1 stop or more. By setting the exposure manually as I did here, all of your exposures will be perfect as long as the light level does not change. The background changed here as the bird swam in and out of the green reflections on a white sky day. Of the two images, I prefer the one above.



left: Southern Ground Hornbill
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/1250 sec. at f/5.6.

There are lots of folks on-line who claim that film has greater exposure latitude than digital and that film handles contrast better. I am not sure what planet they are on. My experience with digital is that it handles bright midday light far better than film. In the high-contrast situation here, the end result does not look as if it were taken at 2:30 in the afternoon on a bright sunny day, yet it was. I would never have even pressed the shutter button had I been using film. Using a reverse S-curve can help to reduce the effects of harsh light.

right: Eastern Screech Owl
Dos Venados Ranch
Rio Grande City, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/125 sec. at f/13.

The light here was blasting 2 p.m. Texas sun. I used Fill Flash to even out the lighting a bit, Shadow-Highlight to bring up the detail in the shadowed part of the nest hole, and again, a reverse Curves adjustment to reduce contrast. The light was so harsh that I never imagined that I would wind up with even a single pleasing image. The owl was attracted to a hollow log that was affixed to a tree trunk by the ranch owner.

left: Secretary Bird
Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with stacked 2X II and 1.4X II TCs and EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/125 sec. at f/8 set manually. Manual Flash at 1:1 for maximum flash output with Better Beamer.

Digital allows photographers to experiment with abandon. This bird was sitting on a nest cluttered with branches, and worse yet, the bird was severely backlit. I made a few images, fine-tuned the exposure, and made a few more images. With the stacked teleconverters, only one was sharp. But more so with digital than with film, you only need one good one because you can make all the dupes that you need without cost.

right: Great Kiskadee
Martin Homestead Refuge
Edinburg, TX

Canon 500mm f/4L IS lens with stacked 2X II and 1.4X II TCs and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/320 sec. at f/9 in Program mode.

I was bored, but digital—after your initial investment—is free, so I went with stacked TCs, focused manually, checked the histogram (I was surprised to see that I needed to add light), and was pleased with the resulting image. When working with stacked teleconverters there is no guarantee of getting even a single sharp image, but those using superior sharpness techniques will often have some success.

Yellow-billed Kite in flight
Ngorongoro Crater, Tanzania

Canon 300mm f/4L IS lens (handheld) with EOS-1D. ISO 100. Evaluative Metering +1 1/3 stops: 1/500 sec. at f/7.1 in Program mode. Fill Flash at -1 stop with Better Beamer.

It was colleague Chas Glatzer who opened my eyes to the possibilities with digital flash, especially digital flash flight. Thanks Chas! I often drop the ISO as long as I can maintain a shutter speed of 1/500 sec. The 1D had a synch speed of 1/500 sec. With the later generation cameras, you need to set High Speed Synch on the flash in order to use 1/500 sec. It is a good strategy not to increase your shutter speed much beyond that as the flash output decreases dramatically as you increase the shutter speed when using High Speed Synch. Viewing the image on the LCD allows you to see if the flash is lighting the bird's undersides.

Wood Stork, feeding juvenile
Little Estero Lagoon
Fort Myers Beach, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -2 stops: 1/30 sec. at f/8 in Manual Mode. Manual Flash at 1:2 with Better Beamer.

I would never have learned to use Manual Flash if I were using film, as there would be no way to know when you had it right. This image was made so long after sunset that the camera could barely focus. I made a few images without even worrying about focusing, adjusting the flash exposure with each frame. Once I got it right, I concentrated on getting accurate focus and was happy with the result. Digital gives folks the freedom to experiment.

left: Great Egret Venice Rookery South Venice, FL

Canon 100-400mm L IS zoom lens (hand-held at 400mm) with EOS-1D. ISO 250. Evaluative Metering +2 stops off the sky: 1/15 sec. at f/5.6. Flash at -1 stop with Better Beamer.

One thing that you learn quickly when using flash in extreme low-light conditions is that the lower the light levels, the less flash is needed to act as flash as main light. In other words, as it gets darker, the imaging sensor becomes more sensitive to flash. You will see this on the LCD. This "flash blur" is a combination of a correct ambient exposure and a correct flash-as-

above: Double-crested Cormorant, Placida, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +2 stops off the sky: 1/60 sec at f/5.6 in Manual Mode. Fill Flash at -1 stop with Better Beamer.

I love experimenting after sunset with digital flash flight: it's like a box of chocolates—you never know what you're gonna get! A good general approach is to set the exposure manually two stops brighter than the white sky and set the flash to -1 stop. Then check your histogram and adjust to taste.

Canada Geese, flight flash-blur, Bosque Del Apache NWR, San Antonio, NM

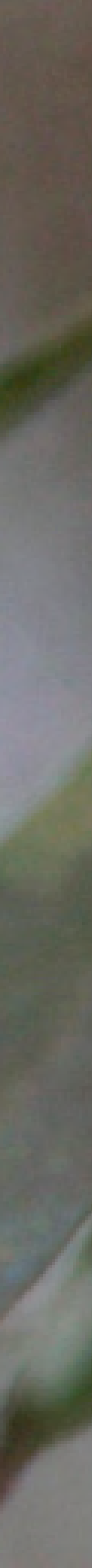
Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 640. Eval. Metering +1/3 stop: 1/8 sec. at f/5.6 Flash at -1 stop with BB.

Digital taught me that the greater the subject-to-camera distance, the less the apparent blur at a given shutter speed. Even at 1/8 sec. the geese in this image are fairly sharply defined. With the sky a relatively dark blue, I did not need much ambient overexposure.

Sandhill Crane, preening flash-blur
Bosque Del Apache NWR
San Antonio, NM

Canon 600mm f/4L IS lens with 1.4X TC and EOS-1D. ISO 1250. Evaluative Metering +1 stop: .8 sec. at f/5.6 in Manual Mode. Flash at -2 stops with Better Beamer.

To create a flash-blur when working in low light with light toned backgrounds, set a very slow shutter speed, add a stop of light to the ambient exposure, then try a variety of flash settings beginning at -1 stop and continuing until the image on the LCD looks good. In such low light, your biggest problem will be focusing accurately. At times, it is best to focus manually and rely on the confirmation beep that sounds when you hit the correct focus while depressing the shutter button.



left: White-eyed Vireo Corkscrew Swamp, FL

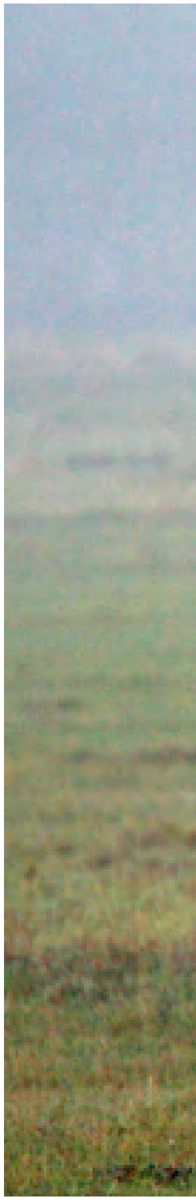
Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/250 sec. at f/8. Fill Flash at -1 1/3 stops with Better Beamer.

With lots of big cypress trees, Corkscrew can be a dark place. Warblers and vireos rarely stop moving so you usually need a fairly fast shutter speed to have a chance. Being able to change ISO settings on the fly is a huge advantage for digital photographers. The Canon EOS-1D Mark II, the EOS-1Ds Mark II, and the EOS-1D Mark II N all feature virtually noise-free images at the higher ISO settings. For an ISO 800 image this one is remarkably noise-free.

above:
Laughing Gull on head of Brown Pelican, Sarasota, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D. ISO 1000. Evaluative Metering +1 1/3 stops: 1/500 sec. at f/5.6. Fill Flash at -1 stop with Better Beamer.

This image was made on a dark rainy morning. EOS-1D images were fairly noisy at the higher ISOs. Noise is generally more evident in the black or very dark areas of an image. When I optimized this image years ago, it looked pretty bad. I oversaturated it and, in addition, the image was extremely noisy. I redid the image recently using BreezeBrowser's High Noise Reduction option when converting it. The results were much better the second time around.



African Lion, young male, Lake Nakuru, Kenya

Canon 70-200mm lens (on beanbag) at 200mm with EOS-1D Mark II. ISO 3200. Evaluative Metering at zero: 1/60 sec. at f/2.8.

We were headed back to the lodge after a great afternoon of photography. It was way late and near total darkness when we came upon a pride of resting lions. Had we been using film, there would have been no possibility of making an image. The f/2.8 lens helped too! The image quality at ISO 3200 can be astounding.

White Rhinos, awakening group at dawn, Lake Nakuru, Kenya

Canon 70-200mm f/2.8 lens with 1.4X II TC (on beanbag at 225mm) with EOS-1D Mark II. ISO 800. Eval. Metering +1/3 stop: 1/60 sec. at f/4.

We left the lodge early to be in position for a flamingo sunrise when we came across this group. Note that I typically raise the ISO enough to get to a shutter speed of 1/60 sec. In action situations there are lots of times when I wish that I had chosen a higher ISO to get more shutter speed...

Terns and Black Skimmers, Fort DeSoto Park, Tierra Verde Key, St. Petersburg, FL

Canon 100-400 IS L zoom lens (handheld at 400mm) with EOS-1D Mark II. ISO 125. Evaluative Metering +2 stops off the white sky: 1/30 sec. at f/13 set manually.

Setting the exposure manually allowed me to continue to make images regardless of the background tonality without having to make difficult exposure compensations. Digital allowed me to confirm that the exposure I had set was indeed correct.

Tern flock blur, Fort DeSoto Park, Tierra Verde Key, St. Petersburg, FL

Canon 70-200mm f/2.8 lens (handheld at 90mm) with EOS-1D Mark II. ISO 50. Evaluative Metering +2/3 stop: 1/8 sec. at f/32.

To get down to the surrealistic shutter speed of 1/8 sec., I needed to lower the ISO to 50 while setting the minimum aperture. When the large flocks of mixed tern species visit DeSoto in fall, I make lots of images and vary my shutter speeds from one extreme to the other.

Snow Geese, long exposure blur, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: .5 sec. at f/8.

Robert O'Toole inspired me to try some really slow shutter speeds. I do not recall the light levels being so low on the afternoon that I made this image... Do note that with the 1/2 second exposure you can see some of the geese flapping four times. That's about eight wingbeats per second.

Snow Geese, cottonwood blur, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/20 sec. at f/64.

I went to the 2X and manual focus in an attempt to bring the color of the cottonwoods more into play.

Snow Geese, liftoff blur, Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 50. Evaluative Metering +1/3 stop: 1/15 sec. at f/51.

The farther away the subjects, the less the apparent blur at a given shutter speed. Many of the geese are sharply rendered here at 1/15 sec. because they were a great distance from the camera.

Snow Geese, blastoff blur, Bosque Del Apache NWR, San Antonio, NM

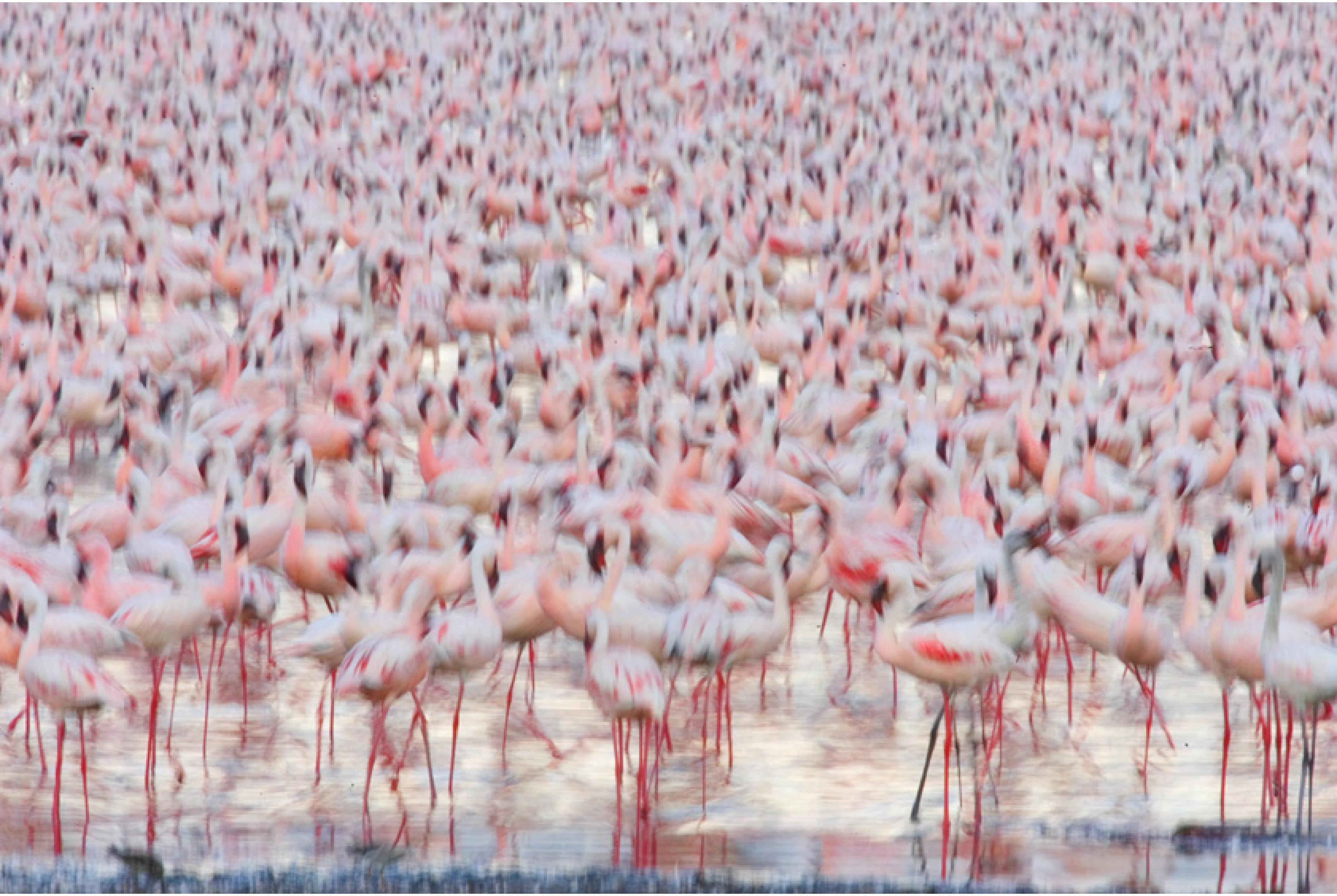
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 500. Evaluative Metering +1/3 stop: 1/8 sec. at f/4 in Manual Mode.

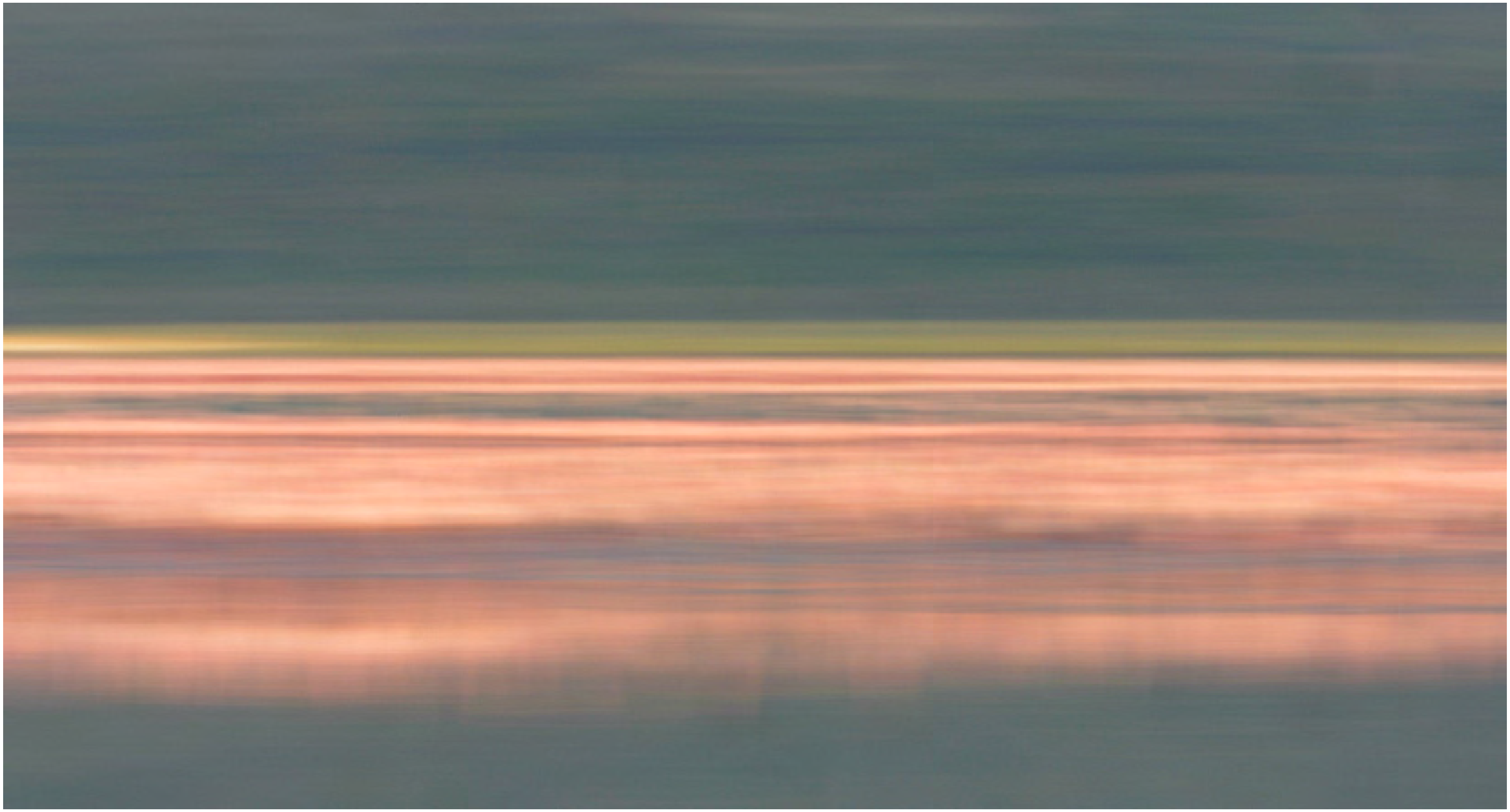
This image was made well after sunset. The birds at the bottom of the frame show the most blur because they were actually closer to my position than the birds at the top of the frame. The closer the subject to the camera, the greater the apparent blur at a given shutter speed.

Snow Geese
marshmallow mountain blur
Bosque Del Apache NWR
San Antonio, NM

Canon 100-400mm L IS zoom lens (handheld at 220mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +1 stop: 1/8 sec. at f/18.

It was cloudy and I was messing around with the 1-4 zoom. The sun peeked out for just a moment when I saw this small flock of geese flying at perfect height just above the snow-capped mountains. I called the situation out to the group and made just a single frame.





both: Lesser Flamingoes, Lake Nakuru, Kenya

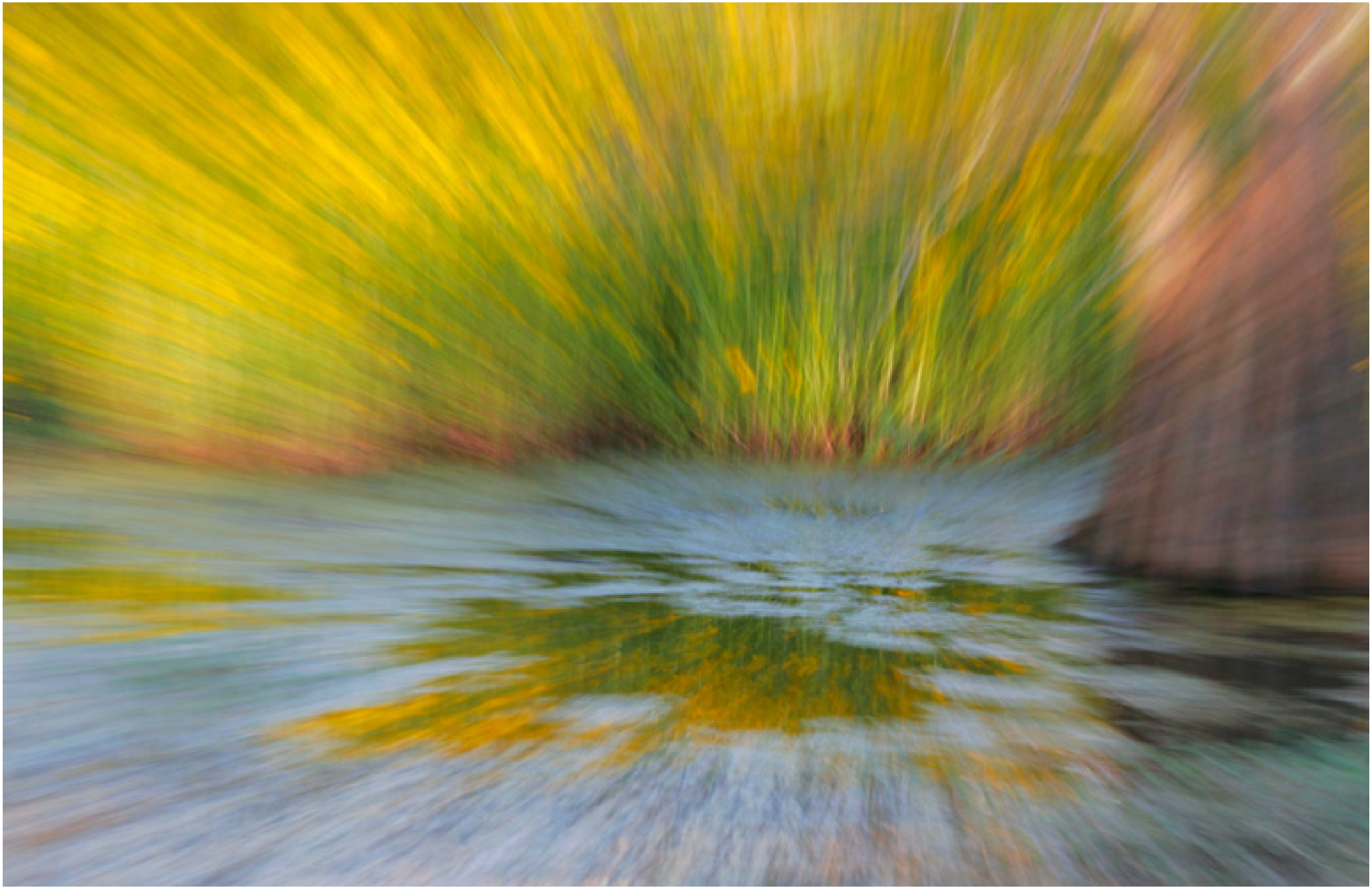
(left): Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/10 sec. at f/32.
(above): Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 50. Evaluative Metering +1/3 stop: 1/8 sec. at f/40.

To create the image on the left, which was taken after sunset, I chose a slow enough shutter speed so that the movement of the feeding flamingoes would create the motion-blur. What I remember most about the situation was the ***sound*** *of a million flamingoes feeding. For the image above, I panned my Wimberley head slowly to create the pan-blurred background with swatches of flamingo-pink. Note that each image features a clean lower frame edge.*

American Coots, Merritt Island NWR, Titusville, FL

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/500 sec. at f/11.

At Merritt the large groups of coots in winter will often flush dramatically as you exit your vehicle. Be ready with an intermediate telephoto zoom lens. Here, the blur is a result of the rapid wingbeats of the coots (despite the relatively high shutter speed).



Cypress swamp with flowers in spring, Lake Martin, LA

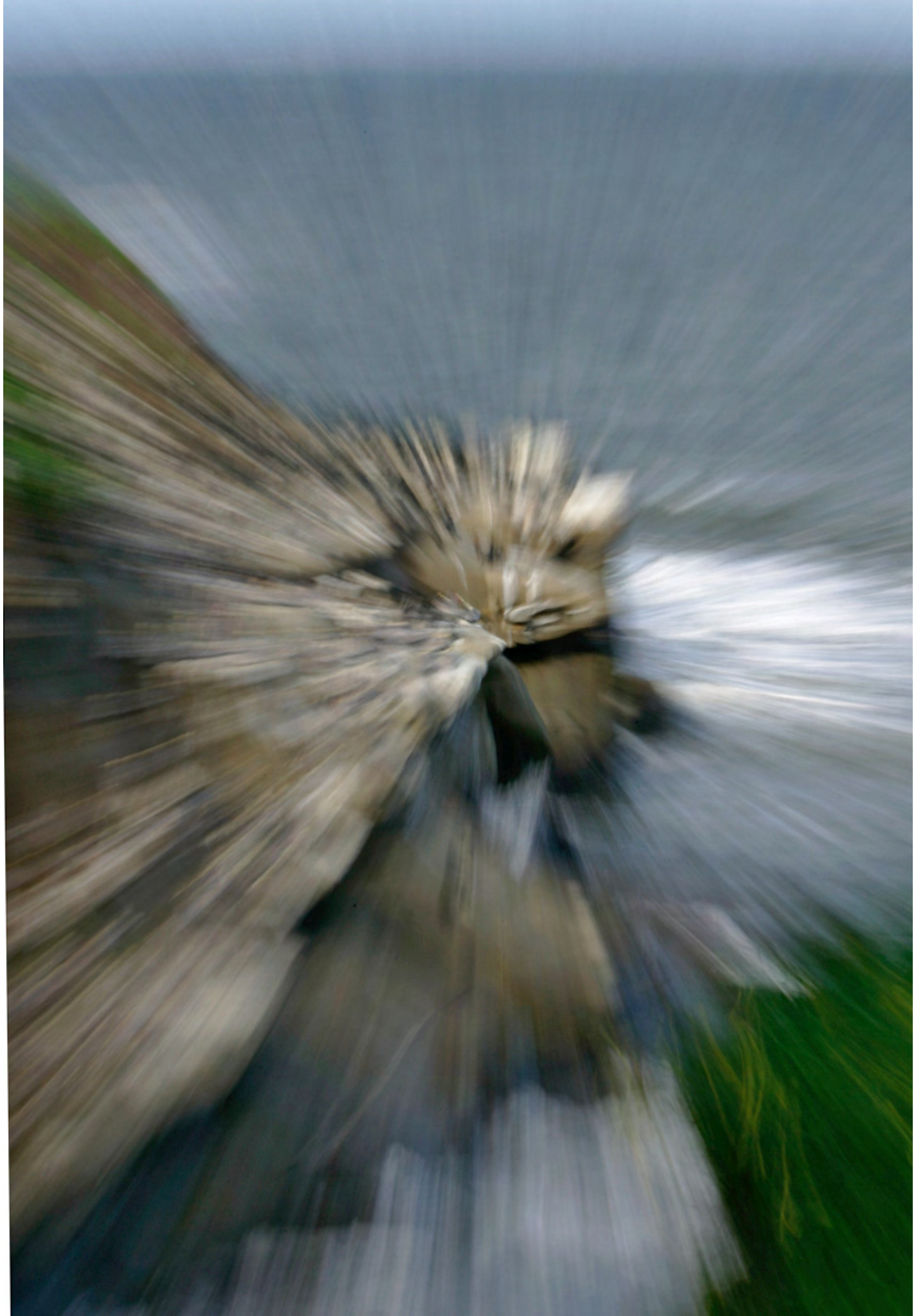
Canon 70-200mm f/2.8L IS lens (handheld at 165mm) with EOS-1D Mark II. ISO 100. Evaluative Metering -1/3 stop: 1/4 sec. at f/22.

When creating zoom blurs, it pays to make many images. By reviewing your results on the camera's LCD you may be able to figure out how a change in shutter speed, zoom rate, or the initial or final framing might yield a more pleasing image.

Brown Pelicans and cormorants on cliffs
LaJolla, CA

Canon 70-200mm f/2.8L IS lens (handheld at 70mm) with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/100 sec. at f/16.

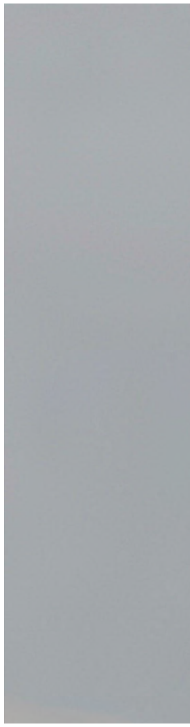
This standard vertical landscape was possible only because of the overcast skies. Had it been sunny, the scene would have been much too contrasty.



Brown Pelicans and cormorants on cliffs zoom blur, LaJolla, CA

Canon 70-200mm f/2.8L IS lens (handheld) with EOS-1D Mark II. ISO 50. Evaluative Metering at zero: 1/5 sec. at f/32.

To make zoom blurs, I usually choose a shutter speed of 1/4 or 1/5 second. Notice that I had to lower the ISO to get that slow a shutter speed. Next, I zoom wide to the final focal length. Then I zoom in, use One-Shot AF, and—using the central sensor only—focus on what will become the central point of the zoom blur. Then I begin to zoom out fairly quickly while attempting to release the shutter just after I begin zooming out. I usually make several dozen images and wind up liking one or two.



all: Sandhill Crane in flight
above: Indian Lake Estates, FL
the rest: Bosque Del Apache NWR,
San Antonio, NM

clockwise from upper left:

1. *white sky flight: 70-200m f/2.8 lens at 155mm: 1/1000 sec.*

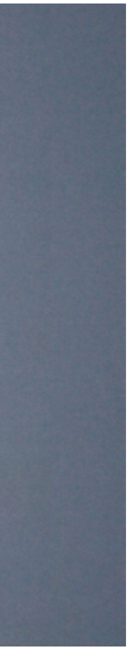
2. *near-dark with 600mm and 1.4X TC: 1/30 sec.*

3. *near-dark flash (-1) flight with 100-400mm at 400mm: 1/80 sec.*

4. *near-dark flash as main light at -1 stop with 600mm lens and 1.4X TC: 1/50 sec.*

5. *near-dark flash flight (-1 2/3) blur with 600mm: 1/40 sec.*

Digital offers almost unlimited options for flight photography. Heck, it allows you to experiment in all types of nature photography situations.



left:
Scissor-tailed Flycatcher
Weaver Ranch
Raymondville, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/400 sec. at f/13.

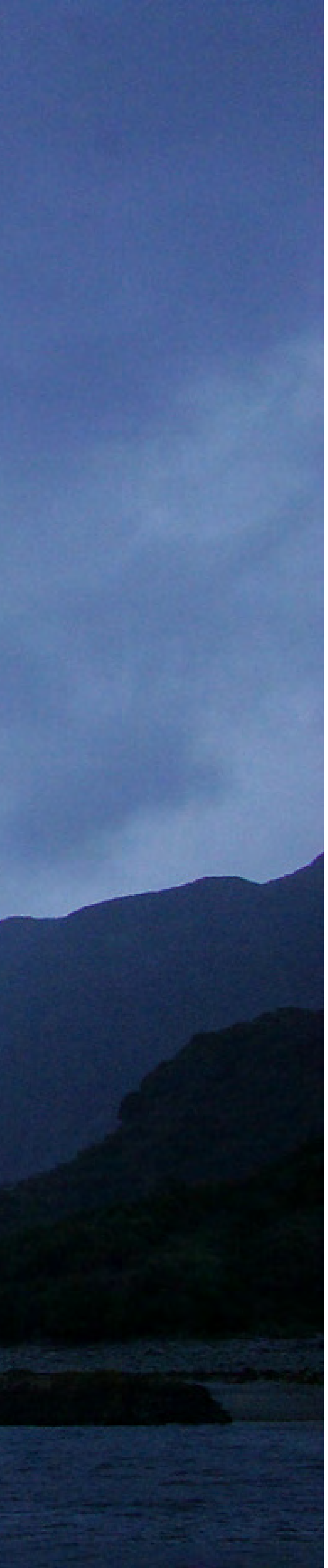
When rancher Kent Weaver offered to take me out at 2 p.m. on a bright sunny day, I accepted only to be sociable, not expecting to make any good images. Using a 50 lb. bag of corn as a beanbag, I worked (with difficulty) from his truck's passenger seat. I reduced contrast with a reverse S-Curves adjustment and love the image. The high winds created the painterly mesquite background. I placed the bird unusually far down in the frame so as to include a patch of blue sky to balance the composition.

Snow Goose at sunset
Bosque Del Apache NWR, NM

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -3 stops: 1/8000 sec. at f/4.

With digital, it is easy to fine-tune your exposures in difficult situations by checking the histogram.

Harry's Crane Pool, located adjacent to Route 1 (north of the visitor's center), can be great for silhouettes and flash flight late on most afternoons.



left:
Hills on dreary morning
Kinak Bay
Katmai National Park, AK

Canon 28-135mm IS zoom lens (hand-held at 33mm) with EOS-1D Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/50 sec. at f/3.5.

It dawned dank and dark on our last morning on the bear boat in September 2005. Most folks were negged out when Robert O'Toole came in and showed us an image that he had just made. Nobody else got excited but I did! I often learn from and am inspired by my students. Corbis grabbed this one!

right:
Brown Pelican snoozing
LaJolla, CA

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/125 sec. at f/11.

Friend and student Linda Robbins showed me a horizontal photograph similar to this one, thus inspiring me to make a series of vertical images created from a position well above the resting pelicans. The immediacy of digital adds immensely to the fun of photography.

American Wigeons courting, San Antonio, NM

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/320 sec. at f/4. Fill Flash at -1 stop with Better Beamer.

The image above, which was created in the shade of a large building, is the converted raw file saved as a TIFF. Even though I had been using flash the original capture had a strong blue cast. I almost always use Auto White Balance as I did here, so I simply converted the raw image in BreezeBrowser using Shade White Balance. You can see how this removed the blue cast and warmed the image up tremendously.

Ever since I began experimenting with changing the White Balance while doing bears in Alaska, I have begun using both Cloudy and Shade White Balance settings when working on days when it is not sunny. If I forget to switch back on the next sunny day I can simply convert the images using either Auto or Daylight White Balance if they look too warm.

The Photoshop
Gallery

European Bee-eater, Lake Manyara National Park, Tanzania

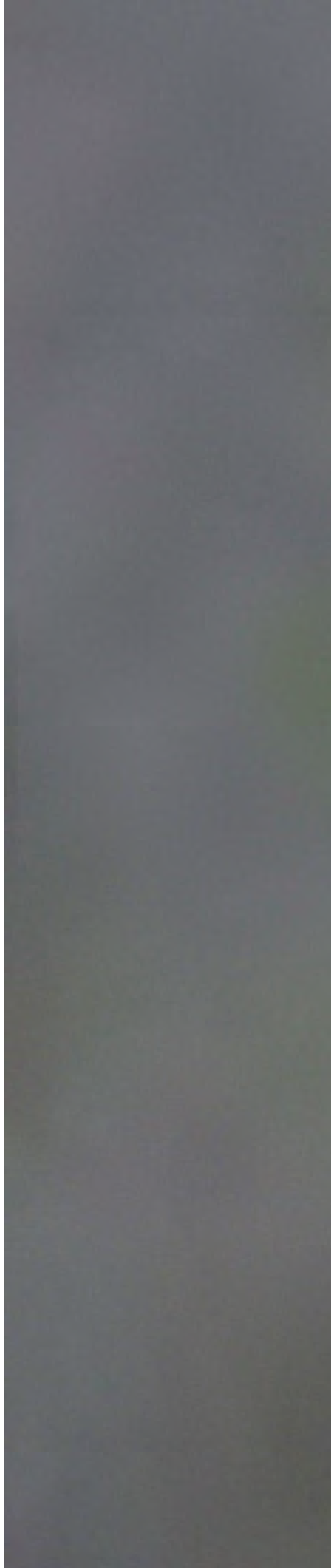
Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering +1 stop: 1/250 sec. at f/13. Flash at zero with Better Beamer to light the shadowed side of the backlit subject.

With digital capture and Photoshop we once again have control of the final appearance of our images just as in the days of the wet darkroom.

Palm Warbler, Point Pelee National Park, Leamington, Ontario, Canada

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/100 sec. at f/8.
Fill Flash at -1 stop with Better Beamer.

The image above is the converted raw file, the image to the right the optimized master file. Some folks might have ethical objections to the work done on this image. I do not. The image above is of a Palm Warbler on a branch looking for a bug. The image on the facing page is of a Palm Warbler on a branch looking for a bug. The natural history of the image has not been changed. Note that I have adjusted color and contrast, removed some out-of-focus background branches, healed some of the scars on the main branch (and removed a small broken one from it as well). We do let our editors know that we adjust color and contrast and that we remove distracting background elements.



Northern Cardinal, male in late afternoon light, Martin Homestead Refuge, Edinburg, TX

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/7.1.

The above image is the converted raw file. The reds were so oversaturated in the late afternoon light that they lost all detail. After pondering the situation for a while, I tried going into the Red Channel in Hue/Saturation and desaturating the reds about 25 points. The optimized image is on the facing page. Of all the color channels, the reds and the yellows are most vulnerable to over-saturation.

Reducing the saturation in the reds brought out the feather detail. The straightforward optimization of an image like this takes only about three minutes.

3-above

1-above

2-below

4-below

Great Blue Heron, grown chick squawking
Venice Rookery, South Venice, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering -1/3 stop set manually: 1/60 sec. at f/8. Fill Flash at -1 stop with Better Beamer.

My old 550 flash, very near the end of its useful life, was malfunctioning. The original capture **(1)** *was over-flashed. Taking a close look at the eye* **(2 & 3)** *reveals a bad case of funky purple flash eye. I repaired the damaged eye as described in the text. The results can be seen in* **4 & 5.** *I darkened the image with Levels and Selective Color adjustments (the latter by adding 2 points of black to both the middle tones and to the blacks).*

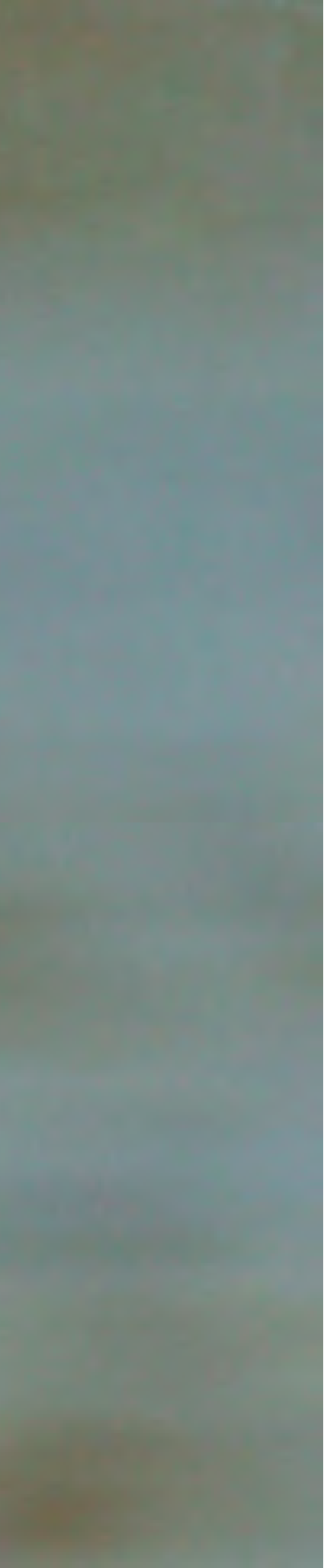
5-above **6-below**

Lesser Flamingo, running take-off, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1600 sec. at f/5.6.

I added canvas to the right side of the image above, cropped from left, top and bottom, and constructed the far wing-tip by cloning carefully and reducing the size of the brush as I got farther out onto the longest primary feather tip. The optimized file is on the facing page.

I jokingly tell folks that the best universal advice that I can give for improved flight photography is, "Pan faster!" Even though I have been doing this for nearly 25 years, it is tough to get it right every time...



Marbled Godwit in flight, Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering -2/3 stop: 1/2500 sec. at f/5.6.

The original image (the converted raw file) is above, the optimized image to the left. The original raw image was well under-exposed due to an exposure error. I added canvas to the top of the frame, carefully built the far wingtip, cropped the image significantly from below and from the right, and did a Levels Adjustment. I understand fully that some folks may feel that what I have done here is not Kosher, but my feeling is that I did not add anything that wasn't already there. In addition, the natural history of the moment has not been altered in any way.

Lesser Flamingo flock, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/160 sec. at f/4.

This photograph was made from the top of a tall hill in heavy mist and drizzle. If you did not realize the power of digital capture you would surely delete this one (see the converted raw image above). But in the larger image (facing page), simple Levels and Hue/Saturation adjustments reveal the colors that were there all along. The panoramic crop strengthens the composition by emphasizing the diagonal of the foreground river and the S-curve of the flamingo flock.

Roseate Spoonbill, breeding plumage, Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/125 sec. at f/8.

The image above is the converted raw file saved as a TIFF without any changes. I first optimized this image several years ago but re-did it for the book using many of the new techniques that I have added over the years. All of the techniques that I used (Shadow-Highlight and Levels adjustments, working with Selections, Selective Color adjustments, and careful cloning) are easily learned and mastered. As I do not save my optimized files with layers, I usually need to re-do an image from scratch if I want to make a large, high quality print. When you learn new Photoshop techniques you can go back and make your good images better as long as you save your raw files.

Barred Owl in fog, Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/200 sec. at f/8.

The fog disappeared with simple Levels, Curves and Selective Color adjustments, and the red-eye was eliminated by selecting the pupil, reducing the Saturation by close to 100 percent, and then using the Lightness slider to darken the pupil. Be sure to feather a few pixels after making the selection but before working on the red eye. Though the difference between the converted raw file (left) and the optimized file (right) is dramatic, the techniques used are relatively simple. (Note also the numerous dust spots in the converted raw file.)

Fish Crow in fog, Lake Martin, LA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop set manually: 1/60 sec. at f/16.

A comparison of the converted raw file above and the optimized file to the right reveals again that even dreary looking digital files contain a wealth of color information. The dust spots in the image above were cloned out using the techniques described in the text.

Note that I cropped a bit from the rear and the bottom to improve the composition by getting the bird out of the center of the frame. It is necessary for me to caution folks on foggy IPTs that they should not be deleting every blah-looking image in-camera...

Snowy Egret in breeding plumage, backlit, St. Augustine Alligator Farm, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/500 sec. at f/8. Flash at -1 stop w/BB.

In the converted raw file above, the shaded side of the bird is well underexposed. (I subtracted light to keep from burning the rim-lit feathers.) The image was worthless until I learned to make Curves adjustments. Note the bright eye and the whiter the whites in the optimized image to the right.

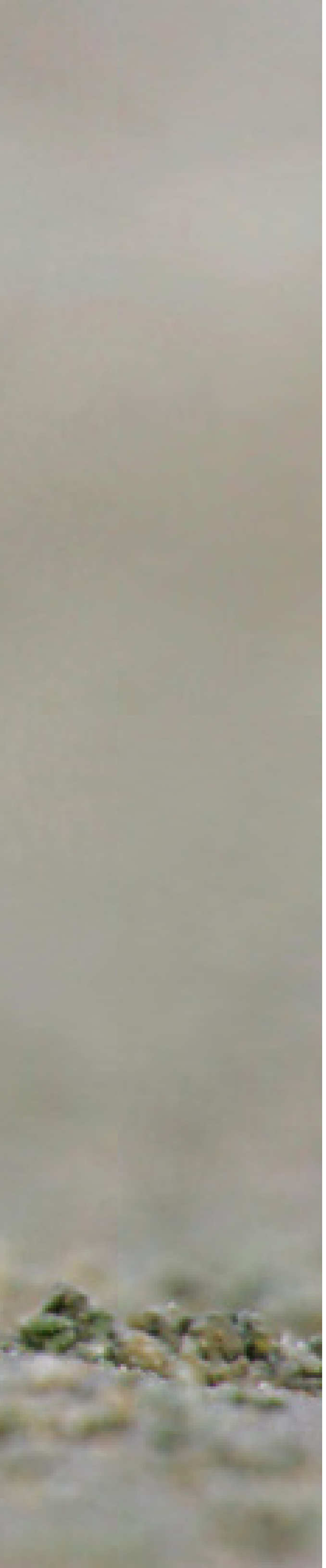
Note also that after the Curves adjustment the black bill is now visible against the dark background. (Using more flash would have helped also...)

Royal Tern in flight with fish for young, Egmont Key NWR, FL

Canon 400mm f/5.6L lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1600 sec. at f/8.

When photographing white birds against clear blue skies, the sky is often rendered an inordinately dark shade of blue. This is a result of our needing to underexpose to ensure that the whites are not burned.

This image was created from the same original raw image file as the image on the facing page. To change the sky color, I selected the sky, feathered the selection 3 pixels, and reduced the Saturation of the blue channel by about 80 percent. If I had reduced the blue channel Saturation less, the sky would have been rendered more blue and less gray. It is easy to create several versions of the same image, each with a different look.

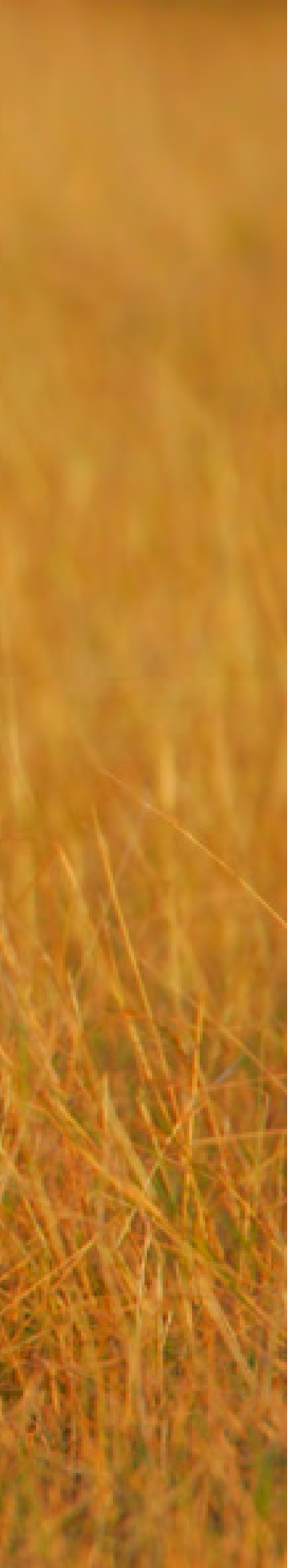


White-rumped Sandpiper, breeding plumage, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC (on Panning Ground Pod) and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/11.

The image above was the first optimized version that I created. Then I created a second optimized version (facing page) by carefully cloning the mud off the bill and removing some distracting background elements. The second version was much more appealing to me artistically. If we receive a request for images of breeding plumage white-rumps, we would submit both of these and let the editor choose.

I had been photographing some dowitchers in a tidal pool by the point at North Beach on May 30, 2005, when a dozen stunning white-rumps appeared magically just yards to my left in the corner of the pool and began bathing.



Wildebeest in early morning light, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC (on Todd Pod) and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/5.6.

In the converted raw image above, there were some extremely distracting grasses in front of the gnu's chin and left front leg. I enlarged the image to 100 percent and worked slowly and carefully with the Clone Stamp to remove the grasses. The cloning process took about 20 minutes. (I had not yet learned to use the Patch Tool; it would have cut the time needed to remove the grasses in half.)

In the converted raw image note the flare just below the ridge-line on the left and the blocked up foreground detail.

both: Wildebeest sunrise, Maasai Mara, Kenya

Canon 70-200mm f/2.8L IS lens at 70mm on beanbag with EOS-1D Mark II. ISO 400. Evaluative Metering -2 stops: 1/640 sec. at f/8.

I chose -2 stops of exposure compensation in an effort to maintain some detail in the sun. That failed, and resulted in the foreground being totally underexposed and detail-less. A large Shadow-Highlight adjustment brought up the foreground detail; I needed to experiment with various Radius settings in order to make the transition between the ridge and the sky look natural. Note also that careful cloning was used to remove the flare.

left:
Wildebeests at sunrise
Maasai Mara, Kenya

Canon 70-200mm f/2.8L IS lens at 90mm on beanbag with EOS-1D Mark II. ISO 400. Evaluative Metering -1 stop: 1/800 sec. at f/2.8.

Though the sun was well muted here, I under-exposed by a stop to maintain detail in the sun. A Shadow-Highlight adjustment was used to reveal the foreground detail.

right:
Common Zebras at sunrise
Maasai Mara, Kenya

Canon 500mm f/4L IS lens (on Todd-Pod) with EOS-1D Mark II. ISO 400. Evaluative Metering -1 stop set manually: 1/640 sec. at f/10.

The foreground was black until I made a Shadow-Highlight adjustment on this image. One option would be to overexpose the sun to reveal more detail in the foreground. A third option that I have yet to explore would be to auto-bracket +/- 3 stops and then combine the sun from the darkest image with the foreground from the lightest image and the sky from the middle exposure...

both:

Brown Pelican at sunset, Sanibel Causeway, Sanibel, FL

Canon 600mm f/4L IS lens and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/100 sec. at f/10.

When I created the image on the facing page (the converted raw file), the optimized image above is what I had in mind. Photoshop—by way of Levels, Hue Saturation, Color Balance, and Selective Color adjustments—helped me realize my vision.

Chapter IV Practicalities

Practicalities

Handling your gear while traveling—and especially while in the field—can make the difference between the success and failure of your images. If you arrive at your location with your gear damaged or inaccessible, you are behind the eight ball even before you load film or a flash card. And if you are in the field, but do not have your equipment handling routines down pat, you will find yourself missing countless opportunities. The well-prepared photographer will always have the advantage over those who seem always to be searching for an important piece of gear or those who have difficulty handling their big lenses.

White Pelican,

Bolsa Chica Lagoon, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds camera body. ISO 250. Evaluative Metering +1 stop set manually: 1/50 sec. at f/5.6.

After traveling by air from Orlando to San Diego and then by car from San Diego to Huntington Beach, it was imperative that my gear be undamaged when I arrived at the location. I always make sure to keep my teleconverters in the large, left-hand pocket of my X-tra Hand vest where they can be easily reached when needed.

This image was made on a clear day well before sunrise. The bank of ground fog just beyond the bird gave an ethereal quality to the light.

Traveling with Your Gear: By Plane

I was in the air on the morning of 9/11, on my way to San Diego, but did not let that immense tragedy slow me down for an instant. I was one of the first to fly after my flight was grounded in Dallas and was surely one of the first photographers to be dump-searched. Now that all checked baggage is inspected, the nightmarish inconvenience of dump-searching is no longer a threat. My post 9/11 air-travel strategies are much the same as they were before our lives were changed forever on that horrific day in 2001.

The addition of the Lowepro Road Runner AW to my travel arsenal has made air travel much more manageable for me. This bag is rather expensive because it was designed as a backpack that can also be wheeled. The first thing that I did when I got mine was to remove all of the backpack-related straps and harnesses and discard them. What I was left with was the world's largest legal rolling carry-on and a sturdy and well-padded one at that. Though it fits into the Roadrunner AW, I rarely bring the 600mm f/4L IS lens on a plane anymore; if I need it at a location I simply ship it in advance—well packed—via FedEx ground. I routinely travel with the 500mm f/4L IS lens.

When I got my Roadrunner, I also removed ***all*** of the padded dividers. To pack for most trips, I remove the 500's detachable hood and place the lens in the empty Road Runner with the front of the lens pointing towards the bottom of the bag. The leather hood is left at home. The detachable hood is placed in one of my two checked bags. I then put two or three digital camera bodies in their own acrylic watch caps (like the woolen ones worn by sailors) and stand them beside the 500. Next, I usually place two of the following five lenses in watch caps and place them in the Roadrunner parallel to the 500mm on the side opposite the camera bodies: the 70-200mm f/2.8L IS, the 300mm f/4L IS, the 100-400mm IS zoom, the 400mm f/5.6L, or the 180 macro. If the latter, the macro twin light is packed in its protective case in a checked bag.

The 28-135mm IS lens, two teleconverters (stacked) and three extension tubes (also stacked) are placed in watch caps and stowed in the Road Runner. Next, I pack the 580 EX flash, the flash cords, and several extra camera batteries. Depending on exactly which lenses and camera bodies I opt to pack, some of the accessories are relegated to the checked bags, but are always placed in their own protective watch caps. It is simply amazing how much stuff you can get into the RoadRunner AW using this approach.

I really do not understand why more folks do not adapt the watch-cap packing routine. The watch caps provide protective cushioning, absorb moisture, keep dust out, and make packing a snap. I get my Carhartt acrylic watch caps from All Seasons Uniforms. Here is a link to their web page: http://www.allseasonsuniforms.com/car123b.htm. I was so excited when I first found this site with the caps at a great low price ($5.99) that I ordered fifteen of them! (If you are lucky enough to find them at a resale shop or a mega-discount outfit, you can get them a lot cheaper than that.) I purchased two or three each of several colors to make finding the various items easier.

If you are asked to gate check your rolling bag on a small aircraft, there are several options. Always begin by saying something like, “Good morning. How are you today? I am traveling with some

Crested Caracara, Lake Kissimmee, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stops in Av mode: 1/250 sec. at f/11.

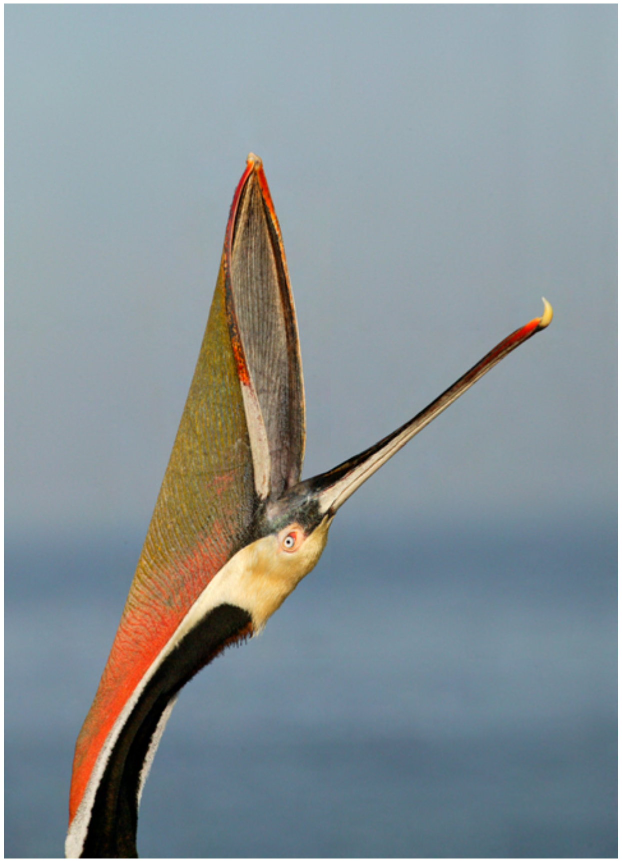
When I am driving my own car, a big beanbag is always in my SUV. If I do not have one with me while traveling, a borrowed motel room pillow will work in a pinch. While photographing from a vehicle, my teleconverters and an auxiliary lens are kept on the passenger seat (often on a pillow).

expensive photographic equipment and I need your help." You might then ask if it would be possible for your bag to be placed in a crew locker if there is one, or, if the flight is not full, if it would be possible for you to place your rolling bag (or backpack) beneath the seat in front of an empty seat. Barring that, ask if it would be possible for you to remove the valuable photographic items from your carry-on bag, place them in the overhead bins, and then gate-check the empty bag. If no help is offered, asking to speak to a supervisor so that you might obtain an insurance waiver often does the trick. On the very rare occasion when you are forced to gate check your rolling bag on a small aircraft, the combination of the watch caps and the sturdy, well-padded Roadrunner pretty much ensures that your gear will make it onto the plane and back into your hands in perfect condition (as long as it is not tossed from the aircraft onto the tarmac)…

My Gitzo CF 1325 tripod is placed in an old Domke large lens bag and then packed in one of my two old-faithful Delsey hard-sided cases, which are my checked bags. In addition, an extra set of teleconverters, extra camera batteries, various chargers, external battery packs, my "photo junk bag," the Wimberley head, a Linhoff ballhead (if I am bringing the macro stuff), and whatever lenses or camera bodies I could not fit into the Roadrunner, are also packed into the Delsey bags, each carefully wrapped in its own watch cap or a clothing item.

When I get to the rental car facility, I open my checked bags right there on the ground next to my vehicle. I remove the tripod from the Domke bag and mount the Wimberley head. I remove the 500 from the Roadrunner, place the hood onto the lens, put the lens into the Domke bag and then place the Domke bag in the trunk. I do not remove the lens hood again until I am packing to head home. The rest of my photo gear is removed from my checked baggage and either placed in the Roadrunner or laid into the trunk of the full-sized rental car. This makes it easier to get your checked bags into the motel room and prevents folks at the motel from noting that your trunk is filled with expensive photography equipment.

Except for the batteries that need recharging and for my digital camera bodies when working in cold locations, I leave all of my photo gear in the trunk of the car each night. Everything is, of course, insured. For those who insist on taking their lenses inside at night, be aware of condensation problems, especially when going from cold to warm. Here's the worst-case scenario: you arrive in Florida on an unseasonably warm afternoon in mid-February. You toss your stuff onto the extra bed and crank up the air conditioning. You head out to Ding Darling the next morning and there is not a breath of air. You head down to the mud bar and find the long-dreamt-of flock of spoonbills there en masse, preening and flapping in still blue water. You mount your lens, but by the time you have mounted your camera and peer through the viewfinder the only thing that you see is fog. Going from cold to warm, you have been bitten by the condensation bug. You look at the front element of your lens and note that it is totally fogged up.



Brown Pelican, LaJolla, CA

Canon 300mm f/4L IS lens (handheld) with EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/2000 at f/5.6 in Av mode.

On most days I head into the field carrying two rigs, a big tripod-mounted telephoto and an auxiliary telephoto lens. The latter is carried via the camera body strap on my right shoulder where I can grab it almost instantly to photograph birds in flight or in action. In some cases, I will work predominantly with the intermediate lens while making sure that the big lens is in a safe spot.

At this point, the fastest way out of this jam is to get back in the car with the lens and turn the heater on full blast to warm the lens until it is no longer cooler than the air. If you are away from a vehicle, it is best to simply point the front element of your lens at the sun and then wipe the front clean of moisture as it forms. I use absorbent cotton if I have it with me, otherwise my tee shirt will do in a pinch. Sometimes one such round does the trick… If you insist on, or are more comfortable with bringing your equipment into the room, you will need to remember to wrap the lens and camera body and accessories in a bedspread or two and stick the whole load into the motel bathroom, as they are usually not air conditioned.

Traveling with Your Gear: By Car

Whether I am at home or photographing from a rental car at some great bird photography hotspot, I follow a few routines that make my life easier. As above, I travel with a big lens or with both big lenses placed in a Domke lens bag and then laid on the floor of the trunk. Except when actively photographing from the vehicle, I never travel anywhere with the camera body mounted to the lens. This will—over time—damage the lens mount. The first time that I need my flash, I mount my flash unit onto a flash bracket and put the Better Beamer in place. After the photo session, I leave the rig—cords and all—intact. I simply lay the whole setup down in the trunk out of harm's way until it is needed again. This saves valuable time as either Wimberley flash bracket can be clamped into place in seconds. The Wimberley Arca-Swiss Flash Bracket affixes to the lens mounting plate, and the Wimberley Head Flash Bracket mounts onto the swing arm of the regular Wimberley head.

If you are really serious about your bird photography, it makes sense to ***always, and I mean always,*** keep a loaded camera body mounted to an intermediate telephoto lens on a pillow on the seat beside you. And this is true whether you are driving around a National Wildlife Refuge or simply—unless you reside in a really big city—tooling around town. Once, upon leaving Fort DeSoto Park, I was in a rush to get home so I packed up all of my gear, figuring that I wouldn't stop for anything. As I approached the first small bridge in Tierra Verde, I was amazed to see about forty frigatebirds right over the roadway, flying lower than I had ever seen them before. I got out, searched frantically for a camera body and lens, and assembled the rig. I looked up to see only an empty blue sky. My "shotgun-riding" rig of choice usually consists of an EOS-1D Mark II on either the 400mm f/5.6L or the 100-400mm L IS zoom lens. Each is easily handholdable and yields an effective focal length of 520 mm.

In the Field Setup

When I'm ready to begin photographing at a new location, the first thing that I do is set up my tripod. I begin by fully extending all of the ***lower leg sections***. Yes, you read that correctly. The lower leg sections on the Gitzo 1325 CF tripod are more than an inch thick and the CF legs are extremely rigid so there is no need to worry about instability. Extending the lower leg sections completely allows me to adjust the height of the tripod by working the middle leg sections. This can be done quickly and easily without having to bend over. Next, I extend one middle leg section about ten inches and lock it in place. I place the extended leg on the ground, pull out the other middle leg sections until they hit the ground, and then tighten them. This ensures that the legs are all extended to roughly the same length. Then I make sure that all of the locking collars are tightened. It is not a bad idea to lean your weight heavily onto the tripod to make sure than none of the legs slip under pressure. Some Gitzo tripods (especially the older all-metal ones) can exhibit a sort of vapor lock: though all of the locking collars are (or seem to be) fully tightened, a single leg may inexorably begin to slip once the big lens is mounted. This scenario has caused many a smashing lens disaster. The height of the tripod is now just about perfect for me for photographing from a standing position. Because having to retract and extend the legs when moving to a new location is a pain, I prefer to be able to drive from spot to spot with the tripod legs fully extended. In some passenger cars this is possible, in others it is not. In most SUVs, this can usually be accomplished easily.

I dropped my old FD 800mm lens once (with no damage). I wrecked a brand new EOS-1n and a brand new EF 600 f/4 lens when leg vapor lock toppled the lens onto a beach at Cape May, New Jersey.

The problem was that, rather than hitting the sand, the camera body struck a piling that had been cut off at ground level. My next (and currently and hopefully last) lens disaster occurred at Ding Darling NWR. I was teaching an IPT and a group of other photographers were crowded around asking questions, glad to see Mr. Famous Bird Photographer. Flattered by all the attention, I was careless and did not see that the lens plate was ***not*** in the jaws of the clamp. When I let go, the rig balanced itself for a second, took a brief glance downwards, and then crashed almost six feet straight down onto a very hard crushed-limestone roadway. The folks at Canon Repair said that they had never seen a lens damaged as badly…

In any case, I decided that enough was enough and have implemented the following procedures to greatly reduce the chances of another mishap.

1. Before mounting or un-mounting a big lens, I tighten both the swing arm knob and the panning knob on my Wimberley head. Leaving either loose, especially the former, can result in your losing control of the lens.

2. I leave the lens-carrying strap attached to the lugs of the big lens (except when I am working off the Panning Ground Pod). Before mounting the lens, I drape the strap over the Wimberley head so that even if the lens falls out of the clamp, it will not hit the ground. I do the same when removing the lens from the clamp.

3. I visually check to ensure that the lens plate is within the jaws of the clamp both before and after I tighten the clamp.

4. I grab the lens by the foot with one hand while still holding onto the barrel of the lens with the other: this final check ensures that the lens is safely mounted to the tripod head. In the field, if I need to step away

American Golden Plover nest with eggs, Nome, AK

Canon 28-135mm IS Zoom lens handheld at 35mm with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/8 in Av mode.

If you are at all into telling stories with your images, it is vital to keep a short zoom lens with you when you head afield with a long tripod-mounted lens. When I forget my 28-135, I generally get about fifty yards from the car when I fervently begin to wish that I had brought it with me.

Common Loon with prey item for chick, Soldotna, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering at zero set manually: 1/400 sec. at f/5.6

At times, you will need to improvise. I was in a tiny Zodiac, and after trying several approaches, I opened the tripod up flat and placed the legs on the gunnels in the bow of the boat. The Wimberley head panned smoothly, allowing me to follow poppa loon as he brought a tidbit to the chick.

from my lens even for a few seconds, I will either place it right next to a tree or a fence, or better yet, lay the tripod-mounted lens carefully on the ground. In the former case, make absolutely sure that the tripod legs are fully spread. I have seen folks leave their rigs in such precarious positions that a light breeze or a strong sneeze would have toppled them. If you make a habit of leaving your rig unattended it will eventually hit the ground forcefully and with predicable results.

After the lens is safely mounted atop the tripod, I grab my X-tra Hand vest and hang it on the swing arm knob on the Wimberley head. I check to see that both teleconverters, three extension tubes, the 28-135 IS lens (in a watch cap), an extra set of flash batteries, my tool kit, several large plastic garbage bags (in the event of rain), sun block, a bottle of water, a healthy snack, and my ground pod (if need be) are stowed as they should be. If bad weather is possible, I will pack my rain gear tops and bottoms in the vest's large rear pouch, and on some occasions, I place an auxiliary telephoto lens there as well. It is my personal style to carry everything that I need on my person; I never carry an extra gear bag or a backpack into the field. At the St. Augustine Alligator Farm (and on other rare occasions when working on paved paths or boardwalks) I do bring my Road Runner AW into the field.

Film-shooters will of course want to check to see that they have sufficient film with them. As for flash cards, I keep mine in a digital wallet in my left-hand pants pocket. Ideally, I have taken the time to format all of my cards in advance so that each is ready for action instantly. Remembering to format a card each time you load one is difficult if not impossible, and losing precious seconds doing so may cause you to miss many a spectacular photographic opportunity.

If the conditions are right for flight photography, I will select one of my three flight photography lenses, mount an EOS-1D Mark II, and carry the lens on my right shoulder by way of the camera body strap. When you loop the strap over your shoulder, make sure that the top of the camera is facing ***towards*** your body so that when you grab the lens you are grabbing it by the grip with your finger over the shutter button. With practice, you will be able to find the shutter button with your left index finger as you are gripping the camera body, depress the shutter button half-way, and set the correct exposure compensation before you even lift the camera to your eye!

Before you start out, turn each of your cameras on. Leave them on all day. The battery power that you save by turning the camera on and off between photo opportunities is insignificant. You would, however, miss countless chances as a result of your forgetting to turn the camera back on. Next, make sure that each of your camera bodies is set to the correct mode, which for me is usually Av (for Aperture Value). I work in aperture priority mode most of the time, and I almost always work wide open (except that with my f/4 lenses I often work at f/5.6). Make sure, also, your cameras are set to the desired metering mode, which for me is nearly always Evaluative Metering. Lastly, check to see that exposure compensation is set to zero. On a related note, make it a habit to ***reset the compensation to zero after*** each photographic encounter. Nothing is worse than setting +2/3 exposure compensation in a given action situation, only to find out soon afterward that you had already had +1 dialed in…

In addition, you need to make sure that AF is on and set to AI Servo mode so that you are ready for flight or action photography. Do consider also which AF sensor or sensors you want activated. If action is most likely, I will usually select all 45 (i.e., AFPS or "ring of fire") sensors. If flight opportunities are most likely, I may opt for the central sensor only.

Your last decision involves whether or not to mount a teleconverter before you set out. Here are some general guidelines:

1. In the extreme low light of early morning, it is usually best to keep your TCs in your pocket as they rob you of valuable light.

2. If there is sufficient light and the opportunity for flight or action at anything greater than point-blank range, opt for the 1.4X TC.

3. If there is lots of light and the most likely chances will involve small birds, mount the 2X TC.

American Bittern, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/640 sec. at f/10 in Av mode.

When you are excited, it is easy to lose concentration and mishandle your equipment. This phenomenon used to be evident on the first morning of IPTs until I started warning folks to "Be Careful!" While driving the Farm Loop, I was surprised to find this bittern posing in late-afternoon light in the main impoundment. Because I was so excited, I took great care while setting up my tripod and mounting the big lens.

Now that you have successfully mounted your lens (without dropping it), have all your gear, and have checked out your camera settings, you are ready to go fishing!

Here is how to carry a big tripod-mounted lens:

1. Place the tripod on the ground with one leg pointing directly away from you.

2. Loosen the panning knob and point the lens directly at yourself.

3. Grab an upper leg section with each hand, bend your knees slightly, and then lift the lens up onto your right shoulder. (Though I find it much easier to carry the lens on my right shoulder, it is best—for health reasons—to switch shoulders every few hundred yards or so.)

In March 2003, after nearly two decades of carrying a telephoto lens on my right shoulder, I developed terrible problems in both shoulders. I was in so much pain that I could see the end of my career in the not too distant future. While conducting a seminar and several in-the-field workshops in Baton Rogue, LA, I met Patti Ardoin, a massage therapist who connected me

with physical therapist Aaron Mattes in Ellenton, Florida. Aaron is the developer of Isolated Active Stretching, a wonderful technique that restored my shoulders to better-than-working shape in short order. I did need to do the stretching at home on my own, but the results were astounding. When taking long walks, I now carry the lens by the lens foot in one hand and the tripod in my other.

Tripod Strategies

In general, I prefer working at standing height behind my tripod. Lens handling is easiest from this position, and the chances of capturing birds in flight and in action are increased when you are standing behind your rig. As I am usually working with a teleconverter, and it is often the 2X, my angle of declination is not too great even when working with birds on the beach, on the ground, or in the water. For folks working with shorter lenses and shorter effective focal lengths, getting low is much more important.

At times, however, even folks working with long effective focal lengths need to get lower. You may simply want a lower perspective, or you may need to get lower to introduce more pleasing background elements. The fastest way to get about two feet lower in just a few seconds without having to loosen any of the leg locks is to undo the locking tab from the forward facing leg and move it up from the bottom-most to the top-most notch. If the bird turns out to be a cooperative one, it is best to take a minute and shorten all of the legs so that you can work from a kneeling position with the tripod platform ***level…*** By doing this you will find it much easier to follow and frame the subject if it begins to move.

When you know that you will most likely be doing some flight photography or working a group of foraging birds from the same position for more than a few minutes, it is best to take the time to level the ***tripod platform*** so that you can follow the moving birds without having to rotate the lens in the tripod collar. When working on solid ground, you will need to adjust the length of either one or two of the tripod legs until ***the bubble in the level*** on the tripod platform is ***centered in the scribed circle.*** With practice, what may seem impossible at first becomes a snap. After leveling the tripod platform, rotate the lens in the tripod collar and check your bubble level to square the camera to the world. Now, wherever you point your lens, you will be squared up. You will not need to rotate the lens in the tripod collar as you pan when following a moving bird. When working in sand or mud, it is easier to level the tripod platform by pushing one or two legs deeper into the sand as needed (rather than by adjusting the leg length).

Least Tern on nest, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/1000 sec. at f/11.

As the beach sloped away behind the colony, it looked as though I was working at ground level, even though I was seated behind a lowered tripod. The Least Terns that attempt to nest on North Beach at DeSoto never succeed as there are simply too many people using the beautiful beaches on weekends.

Baltimore Oriole, Rondeau Provincial Park, Ontario, Canada

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/160 sec. at f/9 in Av mode. Fill Flash at -1 stop with Better Beamer.

This image was made at a simple feeder setup that was erected atop a picnic table. A photographer walked up to me at Point Pelee and suggested visiting campsite #69 at Rondeau if I would like to photograph this species and Red-headed Woodpecker at close range. How lucky can you get?

Setups and Backyard Photography

Photographing birds in one's backyard, or at other locations where the photographer enjoys at least some degree of freedom, can be highly productive. In some ways, such photography might be considered studio photography, even though the subjects are—of course—free, wild, and unrestrained creatures. There are several important issues to consider when planning and designing setups for bird photography, among them are:

- Where should your setup be located?
- From what position will the photographer work?
- Will the photographer be concealed, and if so, in what manner?
- How will the birds be attracted to the area?
- What type of perches, if any, will be used?
- What are the characteristics of good perches?
- How will feeders and perches be erected?
- If the birds will be photographed on the ground, what will the terrain be like?

Where should your setup be located?

Where to place your feeders, water features, or perches is an extremely important consideration. You must take into account the availability of natural light as well as the light angle at various times. Your longest effective and practical focal length plays a large part in this decision as well. Photographers working with 300mm lenses will obviously need to position their setups closer than those working with 600mm lenses. In many cases you are dealing with a two-edged sword. The closer you position your feeders to the house, the less you need to depend on long focal lengths and teleconverters and the more convenient it usually is (especially during colder weather). The farther from the house you place your setup, the more opportunity you will have to work with direct natural light.

Background is a huge consideration, especially for folks who, like me, want their images to have a clean, graphic look. Ideally the background will be evenly lit and the color and texture will be rather uniform with no unusually light or dark areas. But perhaps the most important factor here is the ***distance from the perches you are working to the background elements.*** If you place your feeders in a spot where the woods, brush, or other vegetation are ***right behind*** your setup, it will be impossible to come up with pleasingly de-focused backgrounds (even when working with wide open apertures). On the other hand, even backgrounds of relatively poor quality will look great most of the time if the perch-to-background distance is forty or fifty or more feet. In these cases, it will be easy to produce soft, clean backgrounds of pure or mottled color.

The closer the proximity of your setups to rich habitat, the more birds you will attract. If your setup is in the middle of a sterile suburban backyard, you might only attract House Sparrows, House Finches, European Starlings, Common Grackles, Brown-headed Cowbirds, Red-winged Blackbirds, and the occasional Northern Cardinal or Blue Jay, though this latter species is usually incredibly wary. (Do note that I personally enjoy and profit from photographing these common backyard species.) If you are fortunate enough to live in a home with a backyard that includes or is adjacent to some woods, brushy areas, fields, or ponds, or even some plantings, you will obviously enjoy a far wider range of attractive subjects, especially if you are able to place your setups fairly close to the best habitat. Even in more sterile environments, do choose a spot that offers the birds some access to dense cover, as they will hesitate to come to feeders in wide-open areas. Erecting a brush pile near the setup can help. Lastly, there is a wealth of material on improving your backyard habitats in publications like *Bird-Watcher's Digest*, *Birder's World*, and *WildBird*. (Many of the best articles are by my pal Connie Toops: I have been after her to do a book on the subject for a while now.) Whatever habitat you have to work with, do take care when choosing your location by first considering all of the factors mentioned here.

Red-headed Woodpecker
Rondeau Provincial Park, Ontario, Canada

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/160 sec. at f/5.6 in Av mode. Fill Flash with Better Beamer at -1 1/3 stops.

The woodpecker image at left and the oriole image on page 385 were both created at the simple set-up shown above. Many of the RVers at Rondeau feed the birds on a regular basis so the birds are accustomed to people. Seven of us simply stood behind our tripods in plain sight. The first oriole came a few seconds after I put out the first orange slice, but it took a while for the Red-headeds to respond to the whole peanuts.

From What Position Will the Photographer Work?

When designing and positioning a bird photography setup, or when working at an established feeding station, the first thing to be considered is where the photographer will be positioned. Will you be working from inside a home, from a permanent blind, from a portable blind, or will you simply be standing or seated behind your tripod? Do understand that though these are the most likely scenarios, there are other options that might be best in a variety of situations. Do not be scared of thinking outside the box here; you might do best lying on the ground or working from the deck of a boat or from the storage compartment of a large motor home!

When choosing your location, you must carefully consider the availability of natural light, and, if applicable, the light angle (remember, you always want your shadow pointed at your subject). If the structure is low enough so that sunlight hits your setup within 30-45 minutes of sunrise for morning sessions, or lights the perches until a half hour or so before sunset for afternoon photography, you will be able to take advantage of some richly colored light. If you are purchasing a portable blind or building a permanent one, do consider the height carefully. In the latter instances setting the blind two to three feet or more into the earth can be most beneficial as the effective height of the blind is lowered, and will allow low-angled light to illuminate your subjects for additional periods of time. For those fortunate enough to be able to work with direct sunlight in early morning or late afternoon, my very great preference is that the photographer be positioned so that direct frontal lighting can be utilized.

It can be very convenient to work from inside of a home through an opened window, especially in cold climates or seasons. Some folks with the option of working in a structure that totally blocks the sun may wish to sacrifice direct natural light for convenience. In those cases, Fill Flash can be used to restore color balance, to put a catch-light in the bird's eye, and to increase apparent sharpness. The results can be quite pleasing as contrast is decreased and shadows are absent. In most cases, the distance from the photographer's position to the feeders or to the nearest perch should be roughly the same as the minimum focusing distance of their longest telephoto lens, or two to three feet less when working with very small birds. In either case a 25mm extension tube will allow for close focusing when needed and provide a bit of extra magnification as well (with only minimal light loss). Obviously, if you are working from inside of your home, the photographer-to-subject distance will be controlled by the placement of the feeders and perches.

Will the photographer be concealed, and if so, in what manner?

This is a difficult question to answer. I love to work in plain sight, and when working at established feeders one can be rewarded with many excellent opportunities simply by remaining still and moving slowly. A lot depends on how acclimated the birds are. At Rondeau Provincial Park in southern Ontario, there are lots of folks around, so it is usually possible to make wonderful images while standing unconcealed just outside the fence that surrounds the extensive feeding setup. A long lens is required here. At this and other similar locations, the perches are often inferior and the backgrounds may be quite distracting. One strategy that may work is to confer with the naturalist or refuge manager and offer to donate slides for educational purposes in exchange for the right to set up a few attractive perches and do a bit of house-cleaning. Explaining that making a few small changes will not only improve conditions for photographers dramatically, but make things more pleasing for casual visitors and birders as well will often help seal the deal.

It is almost always best to work from a blind at feeding stations where people do not frequent the area on a daily basis, when working with species that are unduly shy or skittish, or when attempting to photograph songbirds at water drips set up to attract migrants. Portable or throw-over blinds usually work well in these situations, though the latter are quite confining. In rare instances, private landowners maintain feeding stations in remote locations and offer visiting photographers the chance to work from permanent blinds in exchange for a daily fee. In most cases, the income generated allows the landowner to break even at best. The feeding stations and blinds at Roma, Texas, maintained by Roel Ramirez, are a prime example.

Visiting photographers can expect to photograph many of the Rio Grande Valley specialty species over the course of a short visit in winter or early spring. On Brian Small's first visit to Roma he exposed more than one hundred rolls of film in three days. If you maintain a feeding station on your own property you might find that you can photograph the more common birds while photographing in the open, but that you need to conceal yourself in order to get some good chances with the rarer or more secretive species.

Attracting Birds

In most cases, birds are best and most easily attracted to photographic setups with food, with water, or with a combination of both food and water. A variety of feeders may be employed, either store-bought or homemade. There are many types of commercially produced feeders that work well. Included among these are tube feeders, feeding trays, and hopper feeders. In general, I do not get too excited about photographing birds on the actual feeders, though these types of images are often fairly easy to market.

While simply scattering seed on the ground and attempting to photograph the birds that respond can yield decent results at times, it is generally best to use some sort of feeder and to erect a perch or perches nearby. In most cases, including seed in the photograph detracts from their artistic impact. The various birding magazines, however, often request such images. In recent years, many of these magazines have—much to my dismay—expanded their coverage of bird feeding and backyard birding (while reducing or eliminating articles dealing with bird photography). The simplest type of feeder is a feeding tray, which can consist of a small rectangular or square piece of wood or shelving mounted in some manner on a pole or on an old tree stump, or—in a pinch—placed right on the ground. If you will be feeding over the long term, it is best to build or purchase a feeding tray with a fine wire-mesh bottom so that the seed does not become waterlogged or begin to rot after it rains. (For the do-it-yourselfers the wire-mesh from an old window screen would be perfect; the mesh is small enough so that most seeds will not pass through the openings.

Sometimes, cracks and crevices in an old log, a tree stump, or a fence-post can be filled with seed to create a natural-looking seed feeder. An option here would be to create a small hollow to serve as a seed receptacle. A skilled operator may do this with a chain saw, but most of us will be better off sticking to a hammer and chisel. It is generally best to have the front edge of the hollowed out area a bit higher than the rear edge. Then if the feeder is put into place with care, it will be possible to make excellent photographs of birds on these perches without either the seeds or the hollowed out area being visible. Peanut butter or suet can be offered in this manner as well. Another option with these two food items is to spread them into cracks on the ***back side*** of various logs or perches.

Tube feeders and hopper-type feeders hold greater quantities of seed than the usual tray feeder and protect most of the seed from the elements. Tube feeders or fine mesh bags are required when feeding tiny seeds like black niger or black-oil sunflower seeds that are often used to attract the smaller finches. Whatever type or types of seed feeders that you choose, fill them regularly and clean them every two weeks or so to prevent the spread of avian disease. Cleaning your feeders is especially important if you are using sugar-water feeders to attract hummingbirds, orioles, woodpeckers, or other songbirds. Verdins and several warbler species enjoy a sweet drink every now and then; I have seen both Black-throated Blue and Orange-crowned Warblers come to sapsucker wells and sugar-water feeders (as well as to fruit). Wintering warblers will at times take grape jelly from a small saucer!

Oranges can be used to attract a variety of birds. Many of the oriole species are just nuts about oranges, often returning repeatedly to a halved orange until not a single morsel of pulp is left. In Texas' Rio Grande Valley both Green Jays and Golden-fronted Woodpeckers will do the same. Oranges are best offered by affixing them to a small nail (use the ones with fairly large heads) that has been hammered into the side of a tree trunk or into a substantial perch. As nearly all perches that I select will be from long-dead trees, there are often vertical cracks in the branches so that you can easily force a nail into the branch without cracking it. Simply use a sharp knife to cut the oranges in half,

make a small slit in the skin on the back side of the orange, and then slip the orange onto the head of the nail. Apples and other fruits may work equally well for omnivores like Northern Mockingbird, and Greater Kiskadees love thinly sliced sections of banana.

Various types of water features can be used to lure birds within camera range. They can vary in complexity from a small pan filled with water to a dripping garden hose to a large pool replete with entry and exit streams, small waterfalls, and a system for recirculating and filtering the water. A simple water feature may be constructed as follows: Dig a shallow pool. Line it with black plastic sheeting, the thicker the better. Cover the edges with dirt or build a rock border around the pool. Fill the pool with water. Hang a two-liter soda bottle filled with water above the pool. Poke a single pinhole in the bottle so that a nice steady drip results. (You may need to enlarge the hole a bit to do this.) It is the sound of the dripping water that attracts the birds. Lastly, erect an attractive perch above your tiny pool.

The birds will often land on the perch before coming in to drink or bathe, or they may use the perch after they have finished using the water. Traveling photographers may use a simple setup like this to attract migrant or resident songbirds. In general, the drier the conditions the more effective a water drip will be. Do check with the authorities before setting up a water feature in a park or refuge: such activities may (amazingly!) violate regulations.

Long-billed Thrasher
Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with 1.4X TC and EOS-1v. Provia F100 pushed one stop to EI 200. Evaluative Metering at zero: 1/250 sec. at f/9 in Program mode. Fill Flash with Better Beamer at -2/3 stop.

This attractive perch was set about two feet above and to the right of a peanut butter/orange feeder post. Many species of birds landed on the perch on their way to the feeder.

Concrete or molded plastic bird baths usually do a good job of attracting birds to your general area, but in most cases it is not possible to make natural-looking images while the birds are perched on or bathing in these types of water features. Setting up a drip above these baths will vastly increase the number of birds attracted to them. Some species love misters, devices that are attached to a hose and send out a fine spray. Many species love to "take a shower" every now and then, especially in dry seasons or in arid regions. Drippers (devices that can be regulated to allow a steady drip to plink-plunk down into a birdbath or other water feature) attract many species: it's the sound that gets them! Both misters and drippers are attached to a line that runs from your outdoor faucet (just like your everyday garden hose). They can be purchased either by mail order from magazines like *Bird Watcher's Digest* or from many of the bird feeding specialty stores, which are often part of the Wild Birds Unlimited or Wild Bird Marketplace chains.

Permanent water features—depending on how elaborate you wish to make them—can be quite costly to build. Most will have a poured concrete pool as the primary element. Digging a shallow pool and then lining it with a thick plastic sheeting is a less expensive option. In all cases, the pool should have at least some very shallow areas: songbirds will not bathe in water much deeper than ¾ of an inch, and many of the smaller birds prefer it shallower than that. The most difficult problem to be solved when building the larger, permanent pools is that of controlling the background, foreground, and edge elements. The simplest option is to have dirt or dark sand around the edges of the pool, but in most cases these prove less than ideal as artistic backgrounds, especially when they are wet. In addition, any bits of seeds, feather, or bird droppings will

Blue Jay, Louisville, KY

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 500. Evaluative Metering at zero: 1/125 sec. at f/14 set manually. Fill Flash at -1 1/3 stops with Better Beamer.

We spent the better part of a day searching Neil's property for good perches, ones with character. Note that we placed this perch on angle to introduce a diagonal element to the composition.

stand out like sore thumbs on damp black mud. If you line the edge of the pool with small logs or large rocks, you may find yourself blocked when attempting to photograph birds bathing in the neat part of the pool. If the back side of the pool is lined similarly, then the logs or rocks my show up in your background.

If I ever build a permanent pool, it will be fairly large and very shallow, so that most foreground and background problems will be eliminated; my idea of a perfect bathing image is of a bird surrounded totally by water and spray with nothing but water in the foreground and nothing but water in the background. Another problem that often crops up here is that the bottom of the pool (the black plastic sheeting recommended above) may be visible in the photograph. Working from an extremely low angle often helps here, as would laying down a covering of dirt on top of the concrete or plastic liner. Be sure to consider lighting conditions—especially light angle—when choosing a location for your permanent pool.

Types of Perches

During a critiquing session, Barbara Baird—a frequent BIRDS AS ART Instructional Photo-Tour participant—showed some images of birds that she had made for the Coastal Bend Land Fund Photography contest. She had some incredibly beautiful subjects to work with (including Scaled Quail!). Her light angles were perfect and she chose to work only in gorgeous light. And though her images were sharp, well designed and technically perfect, not a single photograph was artistically pleasing… Why? The perches that had been erected outside of her blinds all had serious flaws. In short, they were terrible. Some of them were bleached white, others showed scars where twigs and small branches (or worse yet, the end of the perch itself) had been broken off; others were simply too large for the birds—the perches overpowered the birds with their size and bulk, and the worst of them were of milled lumber with squared off ends and sides and edges, some of those with nails sticking out of them!

When I arrived at my friend Neil Kaufman's home, I was aghast at his setup. He had erected dozens of perches. None offered a clean background, most featured fresh scars from twigs or branches that had been removed, and all merged with at least several others. We worked for a few hours and when we were done we had created a decent arrangement. We photographed from a gazebo on Neil's deck. Note that every perch features a clean background. Fortunately during my visit it was cloudy on most mornings as the gazebo faced right into the rising sun. Neil has since completely revamped his backyard setup so that the morning light-angles are perfect.

The setup in Ned Harris' backyard in Tucson, Arizona, is an excellent one that features natural perches like the cacti as well as a variety of hand-picked perches. Though the water drip attracts lots of birds, it is impossible to make a good photograph of a bird bathing because of the small size of the bath. The cholla skeleton in the cinder block can be moved easily and the same goes for the big log on the "table" with cinder block legs. In the right center of the frame, note that we have capped the cinder block fence support with a log so that we could photograph the quail that landed there on a natural perch.

Cactus Wren (above) and Curve-billed Thrasher (right), Tucson, AZ

Both images were made in Ned's backyard: Canon 500mm f/4L IS lens, 2X TC, and EOS-1v. Provia F100 pushed two stops to EI 200. Flash with Better Beamer.

In the wren image above, the flash (set at -1/3 stop) was used to light the shaded side of the backlit subject. The ambient exposure was set 1/3 stop darker than the evaluative meter reading; the meter would try to make the dark green background middle-toned thus overexposing the subject.

I begged Ned for days to cut off part of the big log as there were two sort of spikes for the birds to land on, and worse yet, the spikes were close enough so that parts of each would appear in any image made of a bird on either perch. If you look closely a the photo opposite, you can see the spot where Ned sawed off the offending perch, thus leaving the one clean perch seen above. You do not want to give the birds too many choices...

Here, the flash-as-main-light technique was used to darken the white sky. I set the exposure manually (1/250 sec. at f/16) to read 1 stop darker than the white sky, which represented a 3 stop underexposure. Then the flash was set to 0 and supplied all the light for correct exposure of the subject.

Choosing great perches for set-up style bird photography is an art, but with a bit of care and some careful searching most anyone should be able to come up with a few decent ones. The best perches are often branches that at times can easily be broken or cut off of dead trees or large, dead bushes. Some folks utilize branches with leaves from living trees (and change them out of necessity every day), others decorate dead-branch perches with flowers or a bit of fall color. Logs, tree trunks or stumps, chunks of driftwood, small or medium sized boulders, and weathered fence posts can also be used as landing spots for your avian subjects. Getting the larger perches in this class to your location may prove difficult or impossible, but in many cases the extra effort involved pays great dividends over time. Plant or tree skeletons may also serve well as perches: Ned Harris has some great cholla skeletons set up in his Tucson backyard.

What are the characteristics of good perches?

As stated above, many folks simply have no concept of what a good perch should be like, while others are simply careless. Good dead-branch perches, logs, stumps, tree trunks, and fence posts should be colored medium to dark gray or brown. Light-toned perches usually prove to be distracting as they create too much contrast, especially when the sun is shining upon them. Worn, weathered branches without bark often make ideal perches. Look for a perch that has character, one in which the wood has some interesting texture or an unusually rich color. At all costs, strive to avoid perches with broken off ends or with fresh scars from twigs or branches that have been broken off. At times you can hide a single scar from view by ensuring that it is on the back side of the perch once the perch is set into place. When selecting small boulders as perches it pays to be just as discriminating. Finding a large lichen-covered rock that can easily be moved into position is always a huge plus, but do—except on cloudy days—avoid using white rocks or boulders for the reasons outlined above.

When I know that I will be photographing in a given backyard or from a permanent blind adjacent to a good feeding station, I will often spend an hour in the predawn light searching for a few perfect perches, and will often do the same during the midday hours when the light is too harsh for photography. When I visit Ned Harris in Tucson, we usually spend a whole morning driving around searching for great perches in the dry washes (streambeds). It is a great idea to have a variety of quality perches on hand so that perches can be switched every day or two (or even more frequently if desired). By doing so, your images will not have the stale look of bird after bird sitting on the same perch.

As far as shape is concerned, variety is always best. I have made great images of birds on dead-straight perches, on gently curved perches, and on angled perches. In addition, try to match the diameter of your perches to the size of the expected species. Tiny branches no more than 1/8 inch in diameter work well for very small birds like warblers and chickadees. About a 1/4 inch thick is about right for medium-sized songbirds like jays, cardinals, blackbirds, and orioles. Small dead trees of one to three inches make great perches for a variety of raptors. In general, you will want to place these larger perches farther from your position than those of smaller diameter. Put some thought and effort into selecting your perches and the artistic quality of your images will improve dramatically.

Perches should be kept scrupulously clean of whitewash for obvious reasons. Dead-branch perches may need to be washed off with warm water every few days or sometimes more frequently. In early June 2002, the season in Churchill, Manitoba, was very late, so there were still lots of Snow Buntings around as well as a few Horned Larks and a very few Lapland Longspurs. We set up a seed feeder using small boulder perches. The action was so furious that the rocks had to be cleaned every few minutes with a toothbrush. Guess who was elected to do that chore?

How will feeders and perches be erected?

Feeders can be mounted on a variety of stands and poles designed specifically for that purpose. Go to your local bird-feeding store or peruse the mail order ads in the birding magazines, and you will be amazed by the variety that is available. If you choose this type of mounting system, you can usually hang multiple feeders from a single stand. Those who are in the least bit handy may choose to save a few

bucks by making their own feeder stands or support poles. In a similar manner, some folks like to sink a length of PVC tubing into the ground and then simply fit a quality perch inside of the pipe, securing it with some rocks or sticks stuffed into the tubing. Another option here is to use a tripod or stand with some type of clamp so that the perches may be positioned and angled with great precision. In these cases, it is as easy as pie to switch perches.

As you might have suspected, I shy away from using manufactured feeders and support stands. I prefer to go natural. One of my biggest complaints is that if you have a bunch of metal pipes stuck into the ground one of them is sure to appear in your photo when a rare ground feeder opts to visit your feeding station or when an adult female Cooper's Hawk is dismantling prey right in front of your blind!

Red-bellied Woodpecker, Louisville, KY

Canon 500mm f/4L IS lens with 1.4X II TC and Canon EOS-1D Mark II. ISO 500. Evaluative Metering -2/3 stop: 1/200 sec. at f/8. Fill Flash at -1 2/3 stops with Better Beamer.

When I arrived at Neil Kaufman's place, I noted an ugly woodpecker perch set into a large flower pot. Neil had been slathering suet on the perch for years and it was a blackened mess, but several species of woodpecker absolutely flocked to the perch, so I put on my thinking cap and came up with a solution. I searched through Neil's perch pile and found a really nice rotted log about four inches in diameter that had nice looking bark. We were able to pull the bark off while keeping it pretty much intact. I placed the three-foot long strip of bark over the old perch as a sort of facade. The suet slots on the sides of the original perch were left exposed. Bingo! As seen here, it worked like a charm. I guess you could call it a sort of backyard renovation. The weathered quality of the bark and the greenish lichens or moss made it an attractive perch.

Golden-fronted Woodpecker, male
Las Colmenas Ranch
Edinburg, TX

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/160 sec. at f/11.

The selection and placement of the perch or perches in set-up photography is of utmost importance. The distance between the perch and the background will, in large part, determine the success of an image. The greater that distance, the softer and more pleasing the background will appear. This well-worn perch has some character. The soft light here works well for me.

Hanging feeders may be hung from tree branches. Platform feeders can be set atop tree stumps. Small tree trunks can be planted and then perches can be taped or better yet, wired into place. (The wire is less obtrusive, lasts longer, and can be re-used.) Some folks like to plant perches in large dirt-filled flower pots so that they can be moved about easily as the light angle changes, but here again you are introducing potentially distracting man-made objects onto your set. Log feeders or perches can be placed right on the ground, mounted on a stump, propped up upon smaller logs or large rocks or even set on a table. By elevating your log perches you will usually wind up with more pleasing backgrounds, as doing so reduces your angle of declination to the bird and effectively "moves" the background farther from the subject. Another approach might be to prop up just one end of a log perch for an angled effect. I like to find a big dead log, with a few nice branches on it, raise it a bit at one end, and use the whole thing as a base for the rest of my perches and feeders.

In general, dead-branch perches should be leaned slightly away from your position so that when the bird lands on the perch, the perch itself will not be between you and the bird, effectively blocking part of the bird's body from view. In addition, it often helps to have the perch angled a bit from side to side. Fifteen to twenty degrees often works well. Alternatively, you may choose to erect the perch in a straight-up-and-down orientation: this forces the bird to land right on the tippy-top of the perch. At times you may plant two forked branches some distance apart and then support an attractive horizontal perch in the forks. This approach often works well above a log feeder, but when birds land on or near the forks, it is best—for artistic reasons—not to make any images.

Positioning the perches relative to the feeders or water features, and relative to each other is of instrumental importance. The simplest setup involves a single feeder and a single perch. It is almost always best to place the perch a bit higher than the feeder itself and a bit off to one side—a foot or two above and off to the side is usually just about perfect, but for the larger songbird species you may wish to double that. The plan is to tempt the bird to land on the perch just before visiting the feeder, and many birds will do just that. Working with just one perch has several advantages: your concentration will be focused on the single perch, and your lens will always be trained on it, so you will have no excuse for missing the picture if a bird lands on it. With a single perch, there will be no problem with merges—situations where a perch or a perched bird appears in the background of your image.

It is hard to resist the temptation to set up multiple perches, especially in situations where a feeding station is extremely active. In general I try to keep the perches relatively close together from side to side, but always put some farther away than others; these will generally be those with thicker diameters designed to attract the larger species. As each perch is put into place, you need to check for background distractions and merges. Ideally you will have distant backgrounds of pure color and no two perches will be on the same sight line. It is best to check by looking through your lens. When working with several photographers in a large blind, the problems are compounded. It can be difficult to impossible to come up with an array in which each perch yields a pleasing background for each photographer. It can take days of fine-tuning to eliminate these problems, and most of the time a perch-setters work is never done.

Take great care when selecting and placing your perches.

Setups and

Backyard Photography

Gallery

Inca Dove, Las Colmenas Ranch, Edinburg, TX

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/10.

I worked closely with Lowry McAllen in developing his ranch for photography eco-tourism. After just a bit of tutoring, he came up with some great setups on his own. Here, he found a lovely log with some long slots in it, positioned the log with the slots just out of sight, and placed seed in them.

Golden-fronted Woodpecker, male
Las Colmenas Ranch, Edinburg, TX

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/7.1. Fill Flash at -3 stops with built-in diffuser lowered.

Lowry found the perfect spot for a thin orange slice: a scar on the side of a tree right on the perfect sun angle from his ground-level morning songbird blind. The fruit was placed on a small nail totally out of sight, hidden by the scar.

At first, the head angle here seems wrong, but without the bird's head being turned well away, the image would not reveal the spectacular reddish orange yellow patch of feathers on the back of his head.

After almost giving up on using flash with digital when working at close range, I came upon a solution while visiting several of the Rio Grande Valley ranches in April 2005. I lowered the built-in diffuser on the 580 flash, set the fill-level at -3 stops, and was thrilled with the results: just a hint of flash that opened up the shadows without causing any major problems with the bird's eyes.

Curve-billed Thrasher, Las Colmenas Ranch, Edinburg, TX

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/8.

With the background here more than thirty yards from the perch, I was able to use some additional depth-of-field without worrying about bringing up any background detail. The early morning light and perfect head angle make this one special. The bit of sky in the background is a negative.

left:
Wild Turkey
Las Colmenas Ranch, Edinburg, TX

Canon 500mm f/4L IS lens with 25mm extension tube and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/5.6.

There are several excellent songbird blinds at Las Colmenas and I have had turkeys come in to all of them at one time or another. Once they find the corn, it can be hard to get rid of them... They eat all of the feed and seeds in minutes and keep the songbirds from coming in. It is hard to imagine that a usually difficult-to-photograph subject can be a pest, but that is often the case at Lowry's place.

right:
Northern Bobwhite group
Las Colmenas Ranch, Edinburg, TX

Canon 500mm f/4L IS lens and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/5.6.

Bobwhites are fairly common at Las Colmenas but you need to be lucky to get them up on a perch as they prefer to feed on the ground. Here, I really lucked out when three males and a female hopped up onto a big perch over the sixty-year-old pond. Getting four good head angles is not easy so I made lots of images when I had this chance. I chose f/11 in an effort to render all of the birds in relatively sharp focus, but that brought up too much background detail so I did lots of cloning, grabbing from the softly focused areas and cloning over the areas with too much detail.

Pine Warbler, male, McCleansville, NC

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/16. Fill Flash at -2 stops.

When working with the high school scholarship students at the 2005 NANPA Forum, I had the opportunity to photograph on Gary Carter's farm. Even though it was January, the number of species that were easily photographed at his setups was remarkable.

To learn more about Gary Carter's photography, or to arrange a visit to the farm, go to www.garycarterphotos.com

Yellow-bellied Sapsucker
McCleansville, NC

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/14.

When I arrived at Gary's farm, there were simply too many perches. In addition, on clear days, the sun angles were poor. By simplifying the setups, we forced the birds to land only on the attractive perches that we provided. By lining up the new perches with clean backgrounds we made it easy to produce uncluttered images. On sunny mornings, I simply stood behind my tripod outside of the blinds: the birds quickly became accustomed to my presence.

When designing permanent blinds it is imperative that sun angle be the number-one consideration. Folks who try to get away with one blind for both mornings and afternoons rarely if ever succeed. Do consider a movable blind constructed of PVC pipe and burlap, camo netting, or fine-mesh camo fabric. Such structures can be moved easily from a morning setup to an afternoon location. In addition, they can be repositioned as the sun angle changes with both the time of day and the season.

right:
Eastern Bluebird, male
McCleansville, NC

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/60 sec. at f/6.3. Fill Flash at -2 stops with Better Beamer.

Gary had several outdoor refrigerators chock full of avian snacks. The bluebirds just love his meal worms.

Carolina Chickadee
McCleansville, NC

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 320. Evaluative Metering at zero: 1/250 sec. at f/14 in Program mode. Fill Flash at -2 stops with Better Beamer.

When photographing tiny birds with a big f/4 lens and the 2X teleconverter, composition is of secondary concern. The birds move so quickly that I use AI Servo and attempt to make the image just as the bird comes into focus. Others do well using a similar technique with One-Shot AF.

The raptor setup on the Cozad Ranch in Linn, Texas, was good, but I saw greater potential. The area around the perch tree was brushy and resulted in cluttered backgrounds so Johnny Cozad had a back-hoe come in and clear it. The red dirt background for tight headshots was an added but unexpected bonus. The birds come to a feast of hog and deer guts and carcasses laid out especially for them. (Other ranchers use beef liver or kidneys with success.) At the Cozad's I recommended that the carrion be placed on a log pile so that there would be a good distance between the birds and the background. Each year that I visited I had Johnny cut away more and more of the perch tree. Eventually, new perches will be wired in place.

Crested Caracara, adult, (above) and Harris's Hawk, screaming juvenile, (right), Cozad Ranch, Linn, TX

Above: Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +2 stops: 1/250 sec. at f/8. Fill Flash at -3 stops with built-in diffuser lowered.

The windows in the Cozad's raptor blind (and most other blinds as well) are too small. Instead of windows, I prefer a single large rectangular opening that spans the entire width of the blind. The blinds on Steve Bentsen's ranch north of Rio Grande City, Texas, have these wide openings. Steve keeps a box with wide strips of camo netting, fine camo mesh, and burlap that can be clothes-pinned to a rope strung just under the roof of the blind. I use the strips only when extremely skittish creatures are expected. The caracaras on the Cozad Ranch are pretty much fearless. The red dirt background here is to die for...

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 500. Evaluative Metering +2/3 stop: 1/500 sec. at f/11.

This young Harris's Hawk flew in while I was still setting up my gear in the blind. The early morning light and the off-centered placement of the subject make this one work for me. It is a good idea to clean the whitewash regularly...

Crested Caracara, Cozad Ranch, Linn, TX

Canon 300mm f/4L IS lens handheld with EOS-1D Mark II. ISO 640. Evaluative Metering +2 2/3 stops off the sky: 1/1000 sec. at f/4 in Manual Mode.

After Johnny enlarged the viewing ports, flight photography with either a big tripod-mounted telephoto or a handheld intermediate telephoto lens was much easier. On white-sky days, I take a reading off of the sky, add from 1 1/3 to 3 stops, set that exposure manually, make one image, and then check the histogram. Most of the Texas ranchers involved in photo-ecotourism will go out of their way to help create ideal conditions. I used central sensor AF and panned with the bird as it flew towards the perch. On some mornings the raptors swarm to the feeding station. The Harris's Hawks usually visit first and the caracaras usually arrive in force by 8:30 a.m. or so. Both species of vultures fly in sometime between 10 and 11 a.m.

Crested Caracara, Cozad Ranch, Linn, TX

Canon 300mm f/4L IS lens handheld with EOS-1D Mark II. ISO 800. Evaluative Metering +2 1/3 stops off of the sky: 1/1250 sec. at f/4 in Manual Mode.

Having chosen the 300 f/4 as my flight lens because of the white skies and low light levels, I was able to put it to good use making portraits of perched birds at point-blank range. Note that I used 1/3 more light for the perched bird than for the bird in flight. If I recall correctly, the exposure that I set manually was equivalent to the metered exposure +2/3 of a stop.

Great Kiskadee, Cozad Ranch, Linn, TX

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/7.1 in Program mode. Fill Flash at -2 stops with built-in diffuser lowered.

There are other good opportunities on the Cozad ranch aside from the raptors. This image was made at their Dominguez blind. I love the soft light.s

Texas Horned Lizard
Cozad Ranch, Linn, TX

Canon 180mm macro lens with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/100 sec. at f/16.

Linda Robbins found this guy crossing the road. Despite its appearance, the creature was quite docile. It was easy to pick him up and place him on a convenient log to be photographed. After we finished, we put the horned toad near the spot where we had first found it. We learned later that Texas Horned Lizards are usually not such cooperative subjects. We had been lucky.

To arrange a visit to the Cozad Ranch,click here:
http://www.cozadranch.com/

Texas Horned Lizard
Cozad Ranch, Linn, TX

Canon 180mm macro lens with two 25mm Extension Tubes and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/500 sec. at f/3.5.

I made lots of photos of each pose and varied the f/stops from wide open (as here) to f/22. Of this series, I much preferred the wide-open version. With little depth of field the eye was pretty much the only thing in focus. I did make some other images similar to the image above with the 300 mm f/4L IS lens with a 25mm extension tube.

Blue Jay, Louisville, KY

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/125 sec. at f/10 set manually.
Fill Flash at -1 1/3 stops with Better Beamer.

Neil Kaufman plants a short heavy stake in a large flower pot and then duct tapes a different attractive perch in place every few days.

Tufted Titmouse, Louisville, KY

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 400. Evaluative Metering at zero: 1/160 sec. at f/8 set manually. Fill Flash at -1 2/3 stops with Better Beamer.

Here, we placed a thinner perch close to Neil's gazebo blind for the smaller species. Note that digital noise is evident in 1Ds images made at ISO 400. The EOS-1D Mark II and 1Ds Mark II bodies proved far superior at controlling noise at the higher ISOs. Noise in those cameras at ISO 1600 is comparable to the noise in 1D images made at ISO 400.

right: Painted Bunting, male
Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/250 sec. at f/8 in Av mode. Fill Flash at -3 stops with High Speed Synch and built-in diffuser lowered. One Shot AF: focused on the eye and recomposed.

left: Bronzed Cowbird displaying
Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with stacked 1.4X II and 2X II TCs with EOS-1D Mark II. Manual Focus. ISO 400. Evaluative Metering +1 stop: 1/250 sec. at f/10 in Av mode. Fill Flash at -3 stops.

I resort to using stacked multipliers only when distant birds are especially attractive for one reason or another. Displaying birds of this species remind me of Elizabethan nobles with their extravagant ruffs. Virtually the entire sky was flashing black on the LCD display warning that it was over-exposed and detail-less, but this was a necessity in order to come up with the right exposure for the black subject in low light.

Years prior to making this image I had a very similar chance at this bird in virtually the exact same spot at Roel Ramirez's morning blind. I was so nervous then that while using the central sensor I focused on the bird's back; as a result, the eye was out of focus. It is rare to get second chances in bird photography but when the opportunity arose, I made sure not to repeat my mistake. This spectacular species begins showing up on many of the Rio Grande Valley ranches in late April. They rarely take food, preferring instead to bathe in or drink from tiny pools.

Most types of orioles and a host of other species including Northern Mockingbird, Green Jay, and Golden-fronted Woodpecker are easily attracted to halved or quartered oranges. The trick is to position the orange so that the bird has a bit of a hard time getting it and can be photographed on the perch without the fruit. Many magazines, however, like to run images of the birds at the orange to illustrate articles dealing with bird feeding so I always try to make a few photos of this type.

left:
Hooded Oriole, male at orange
Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 200. Evaluative Metering at zero: 1/250 sec. at f/8 in Program mode. Fill Flash at -3 stops with built-in diffuser lowered.

right:
Long-billed Thrasher
Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/250 sec. at f/8 in Program mode. Fill Flash at -3 stops with built-in diffuser lowered.

It is important to have large viewing ports in all blinds so that the camera can be swung in almost any direction with ease. This thrasher was perched in a mesquite tree high and to the right of the blind, but with the soft light and white-sky conditions, sun angle was not a factor and I was able to come up with a pleasing image.

left:
Chestnut-backed Chickadee Portland, OR

Canon 300mm f/4L IS lens (handheld) with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/250 sec. at f/5.6 in Av Mode. Fill Flash at -2 stops with Better Beamer.

We looked for the feeders "behind the Audubon bookstore" for quite some time before an early-arriving employee showed us where they were: right behind the bookstore. We had missed them because the feeders were hanging within several feet of the building and there was a steep cliff right below them.

With the birds so close, I went back to the car and traded the 500 for the 300 IS. With its light weight and close focus it was the perfect tool for the job.

above:
Red-breasted Nuthatch, Portland, OR

Canon 300mm f/4L IS lens (handheld) with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/200 sec. at f/5.6 in Av Mode. Flash as main light at -1/3 stop with Better Beamer.

With the light levels dropping, I elected to use lots more flash with this image than I did with the chickadee on the facing page in an effort to maintain sharpness.

Dunlin chick, Nome, AK

Canon 600mm f/4L IS lens with 2X II TC and Canon EOS-1D Mark II. ISO 500. Evaluative Metering at zero: 1/250 sec. at f/8. Fill Flash with Better Beamer at -1 2/3 stops.

Shorebird chicks are up and about within hours at most of hatching, so opportunities to photograph them are few and far between as they scurry about the tundra like mice. This Dunlin chick, only a few days old, climbed up a tiny rise and paused for just an instant...

Tundra Photography

Photographing birds on sub-arctic tundra and in tundra lakes and ponds can offer varied and wonderful—heck, often spectacular—opportunities with both migrant and breeding species, but doing so requires some specialized techniques and lots of family-specific knowledge. I am strictly a motel person (ESPN and HBO required…) so eco-tourist-friendly towns like Churchill, Manitoba, and Nome, Alaska, both of which offer modern motels, rental vehicles, and good road systems with access to sub-arctic tundra are ideal for me. I have visited each of these locations more than once, and each visit has resulted in many wonderful images and lots of great memories as well.

Clothing and bugs are two important concerns when photographing on the tundra. The weather is often changeable and at times, conditions can be quite nasty. Nearly all of my tundra photography has been done in the month of June and though I have brought long underwear on each of my trips, I have never worn it. The coldest temperature that I have ever experienced on these trips was the 31 degrees (with sleet and hail) that greeted me when I stepped off the plane in Churchill for the first time; it had been 99 degrees at the Winnipeg airport earlier that day… For the most part, temps will range from the low thirties to the low seventies (on occasion), with most days in the forties and fifties. The key to dressing for the field is to dress in layers so that you can add or remove items as necessary. When hiking on the tundra the tendency is to overdress, as hiking can be quite strenuous and it is easy to become overheated.

I love my X-tra Hand vest in the sub-arctic because it allows me to pack an extra sweatshirt and my rain suit in the rear pouch for use when needed or to stow those items in the event that I do need to shed layers. A good rain top and pants, such as those made by NorthFace or Columbia, are mandatory as you will spend lots of time sitting on damp or wet tundra when photographing nesting shorebirds, jaegers, and songbirds. Getting low usually improves the artistic quality of your images. I bring a heavy parka for the coldest, wettest days and have rarely used it, but it has been a lifesaver for this now Florida-boy on several occasions. Chest-high neoprene waders (I got my favorite pair from Cabela's and love them) are an option. With waders, you are guaranteed not to take any water over the tops of your boots and you are free to traverse small ponds and pools at will. However, most folks find them too uncomfortable for full-time use.

Having waders along can save the day if you are lucky enough to find a nest in a pond where it is necessary to photograph the bird or birds while standing in the water. My only opportunity to photograph a Horned Grebe at the nest was at the Granary Ponds in Churchill, and it would not have been possible without my waders. Having them with me on my Anchorage layovers has enabled me to get some great stuff on Red-necked Grebe at local ponds and lagoons. Though on some of my tundra trips I never take the waders out of the van, I will always have a pair with me when I am near the Arctic Circle.

Do take great care whenever you are in the water with your big rig. Always advance by lifting your tripod and setting it down in front of you (this helps to test the bottom for structural irregularities like holes or soft muck and for obstacles like holes, rocks, or large branches or even fallen trees). Always proceed slowly and take small steps. Losing your balance and falling could cost you between ten and twenty thousand dollars… Be sure, also, to take extra care when changing film, flash cards, or accessories. Though I try not to be paranoid about it, I always caution myself in these situations by intoning softly, "Don't drop it, don't drop it."

As for bugs, I try to protect myself with clothing rather than with chemicals. For the most part, I simply wear light gloves, a long sleeved shirt, and a head net with eyeholes when the wind is down and the mosquitoes ("mossies" to the British birders) become bothersome. When they become fierce, I will resort to wearing my bug shirt and use some roll-on insect repellent on the back of my gloves and on my head net (but only around the eye holes). On the very rare occasions when that does not work, I will add the full head net that came with my bug suit, but then I am stuck looking through the mesh… At these times, you do, of course, need to rely totally on autofocus.

Bar-tailed Godwit
Nome, AK

Canon 600mm f/4L IS L lens with 2X II TC and EOS IDs. ISO 160. Evaluative Metering -1/3 stop: 1/250 sec. at f/8.

Male bar-taileds are usually very skittish. This individual allowed us to approach fairly closely on a rainy afternoon (if only for a few seconds...) Nome offers visiting photographers a chance at several Siberian breeding species.

Finding nesting shorebirds on the tundra is both an art and a skill. It is imperative that during the process of finding a nest and during the process of photographing it, care be taken to ensure the well being of both your subjects and their potential progeny. Though I will do my best to teach you the basics here, it takes years of practice to become a competent arctic nest-finder while at the same time engaging in practices that will minimize the disturbance of the nesting birds. At times, you may be lucky enough to spot a shorebird on the tundra from the road, while on many occasions it is necessary to walk the tundra in order to flush a bird off the nest or locate its mate (which is often nearby). When you see a bird on the tundra, you may wish to walk right up to it without your lens. This sounds like a lunatic's approach to bird photography, but once you begin to understand the biology of breeding shorebirds, it will begin to make sense.

If the bird is a migrant, or is simply resting or feeding on the tundra, or searching for a mate, it will—in almost all cases—fly away as you begin your approach. If, however, the bird is one of a mated pair, it will usually fly off only a short distance. This should be your signal that a nest is likely to be nearby. At times, the mate of an incubating bird can be photographed without there being a need to find the nest, but be aware that you may have flushed the incubating bird off of

the nest without realizing it. Here, you have an option. If the weather is relatively nice, you may opt to try and make a few images of the cooperative bird before backing off. If the weather is harsh, back off immediately: keeping a bird off its nest in cold or rainy weather for more than a few minutes may result in fatal chilling of the eggs. When you do back off, move at least 100 yards or so away, or, better yet if it is convenient, return to your vehicle. Watch the bird carefully. It may take some time, but if the bird you are watching is the incubating partner, it will in nearly all cases return to the nest. You will notice it zigzagging across the tundra at first, and then moving onto the nest after a few minutes. If the bird appears nervous, back off even farther or leave the area.

Many of the sandpipers tend to nest in obscure spots, their nests covered with tundra grasses; when they move onto the nest, it is likely that they will become invisible. Others, especially larger species like Whimbrel, usually nest in fairly flat, open areas. The plovers tend to nest in rocky areas or atop a tussock or mound; they can often be seen from a distance when they are on the nest. In any case, congratulate yourself: you have found your first shorebird nest. You will most likely wish to mark the nest so that you may return to it later. Do note that with some species, like Hudsonian Godwit, the birds are so stealthy that it is virtually impossible to find the nest. The good news with Hudsonians is that the off-duty partner is often an extremely cooperative subject. (In many shorebird species the adults share the incubating duties.)

Gyrfalcon triplet chicks, Nome, AK

Canon 600mm f/4L IS lens with EOS-1D Mark II. Evaluative Metering at zero: 1/100 sec. at f/11. Fill Flash at -2 stops with Better Beamer.

After chatting with a friendly woman in two local stores, we learned that her husband was an experienced falconer. On each of our two visits to Nome, John Earthman was kind enough to direct us to a photograph-able Gyrfalcon aerie. It pays to be open to serendipitous events in your life.

Tundra

Photography

Gallery

American Golden-Plover, nest distraction display, Nome, AK

Canon 600mm f/4L IS lens with EOS-1D Mark II. Evaluative Metering -1/3 stop: 1/250 sec. at f/6.3. Fill Flash at -2 stops with Better Beamer.

Behavior like this indicates that the nest is nearby. After making a few images, we backed off and allowed the bird to return to its nest.

Red-throated Loon, male
Nome, AK

Red-throated Loon, male, Nome, AK

above: Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/640 sec. at f/11.

It was IPT-participant Jim Urbach who first gave this pair of loons a go. Before my first visit to Nome, I had heard that Red-throated Loon was an impossible to photograph species. I was thrilled that Jim proved that wrong.

left: Canon 600mm f/4L IS lens with 2X II TC and EOS-1D. ISO 400. Evaluative Metering +1 stop: at zero: 1/320 sec. at f/9.

This is a vertical crop of a horizontal image. To create this series of images we sat stock still at the edge of a pond that was not too far from town. With the soft light and the light violet water, I needed to add 1 stop of light to the Evaluative Meter reading to come up with a good exposure for the darker subject.

Red-throated Loon, male flapping, Nome, AK

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/1000 sec. at f/8.

While I usually like to stop down to f/11 when using the 2X teleconverters with f/4 super-telephoto lenses, I choose f/8 when the fastest possible shutter speed would be advantageous. With the soft early morning light, there was no need to stop down to save the whites.

Photographing on Safari

Photographing birds and other wildlife from the open roof hatch of a safari vehicle in East Africa is a tremendous thrill, and for many, a once in a lifetime opportunity, but it presents a unique set of problems for the traveling photographer. (It goes without saying that you have joined a photography safari: trying to photograph from a van with a group of tourists anxious to get on to the next lion is simply not an option for the serious photographer.) First and foremost is the problem of protecting your equipment while moving about in the field in a safari vehicle while searching for potential subjects. The roads in the parks and refuges are rough, and without taking special precautions, your lenses and cameras will soon be flying around inside the vehicle with predictable results. And FedEx does not deliver overnight to safari camps... If your equipment is damaged and unusable, your safari experience will not be an enjoyable one.

On a typical game drive, there will be dozens or even a hundred or more stops and starts in a typical morning or afternoon session. You must, prior to each and every one of those moves, ensure that all of your lenses and accessories are secure before the vehicle begins to move. And while you may not be directly responsible for communicating with the driver/guide, you certainly should shout, “Stop, stop!” if you find yourself in an untenable position while trying to stow your gear safely.

One option is to hang a lens bag over the back of the seat in front of you and stow your long lens with the camera body mounted in it whenever the vehicle is moving. Another is to simply hold your rig on your lap. The last option is best by far: stand, with your lens in position atop the vehicle and physically hold the lens in place. This method allows you to be ready to begin making images the instant that the vehicle stops. And in many cases, an instant may be all that you may have: both birds and animals will often freeze for a few seconds at most before they either begin to move slowly away from the vehicle or flee. Ideally all of the photographers will choose the latter option (if it is physically possible) so that the vehicle will be rock-steady for all. Nothing is more frustrating than to have a great image lined up in the viewfinder while the van is rocking side to side as a

left: Batteleur Eagle, Tarangire National Park, Tanzania

Canon 500mm f/4L IS lens with 2X TC and EOS-1D.
ISO 400. Evaluative Metering +1/3 stop: 1/80 sec. at f/13.
Fill Flash at -1 stop with Better Beamer.

This bird was about 80 feet up in a tree, but with the long effective focal length the angle of inclination appears much shallower than it was.

right: African Elephant young, drinking Samburu National Park, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC. ISO 250.
Evaluative Metering at zero: 1/500 sec. at f/8.

Some folks opt to leave their super-telephoto lens at home on trips to Africa, but whether your primary interest is birds or mammals that, in my very humble opinion, is not a good idea.

Defassa Waterbuck, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 200. Evaluative Metering +1/3 stop: 1/640 sec. at f/5.6.

In Africa, as elsewhere, I prefer direct frontal lighting. I rely on the drivers to ensure that my shadow is pointed directly at the subject. This is true even when the light is relatively soft.

fellow photographer tries frantically to get into position. In addition to securing your big telephoto lens, you'll need to secure your auxiliary lenses and accessories while at the same time keeping everything within easy reach. I do this by placing my open LowePro Road Runner AW on the empty seat in my row. I keep the case open by hanging my X-tra Hand vest over the seatback so that the front lapel-panels hold the cover of the rolling case in place. In the open rolling bag I place the 28-135mm IS lens, two teleconverters (stacked), and three extension tubes (also stacked). Each item is usually nestled in its own acrylic watch cap. I keep a camera body strap on the Canon 100-400mm IS zoom lens setup. The versatility of this lens (and its close cousin, the Nikon 80-400mm VR lens) often prove extremely useful in Africa as many of the birds and animals may come quite close to the vehicle. To store this rig safely, I loop the strap over the back of the seat ***in front*** of the one with the Roadrunner on it, and then place the lens atop the rolling bag so that I can grab it quickly whenever it is needed. I often leave the front and rear caps off of the teleconverters to save valuable seconds. I place a sweatshirt or towel on top of the opened bag to keep everything in place. This also helps keep the all-pervasive African dust off the equipment. Whatever system you adopt to ensure the safety of your equipment, you must follow it rigorously.

Some guides are not aware of the particular needs of photographers, so have the leader ask the driver to take special care when encountering unusually bumpy situations, and ask him or her to let the photographers know when a rough section of road lies ahead. In addition, it is usually necessary—even with experienced guides—for the leader to explain the basics and the importance of light angle to the driver, and to further explain that you will often be asking them to make numerous and sometimes seemingly insignificant moves so that the group will be able to make the best possible images. Sometimes, the use of a simple diagram or two can help drive this point home. For drivers who succeed admirably, it makes common sense to me to increase the standard tip because the amount of extra work involved is substantial.

On some photo safaris, you are forced to photograph from a lowered window. These types of safaris are to be avoided at all costs. In these

instances, however, many of the same techniques that you would use when photographing from your own car back home may be used. Because of the greater mobility and freedom that it provides, photographing while standing in an open roof hatch is greatly preferable, but there are times when you will want to photograph from the window in order to take advantage of a lower perspective, especially when working with intermediate telephoto lenses. Handholding these lenses to follow action is usually best, but with super-telephotos a beanbag or a pillow provides an excellent means of support. Even when working from a roof hatch, it is a good idea to open the windows on both sides and leave them open unless the roads are particularly dusty. Having to take the time to roll down a window, will often cause you to miss a once-in-a-lifetime opportunity completely, and at times the act of opening the window might scare off a subject in close proximity to the van.

There are several options for supporting your big lens when photographing from the roof hatch. The simplest way to go is with a large beanbag. The largest size Kirk Hugger, was, for those lucky enough to have one—it is currently out of production—my first choice, but most any large beanbag will do in a pinch. It is best to travel with the beanbag empty to save weight and have your driver buy some beans locally with which to refill the bag. Do not rest the foot of the lens on the beanbag as this creates instability. Do set the beanbag down in a convenient spot on the roof-hatch frame and then place the barrel of the lens atop the beanbag. If working with manual focus in one-shot ("S" for Nikon users) AF mode you will need to move the lens forward or back a bit to make sure that the manual focusing ring does not rest on the beanbag lest you inadvertently throw off focus. If your only option is to place the manual focusing ring on the beanbag you will need to work in AI Servo ("C" in the Nikon system) AF mode when doing so. (Note: the new BIRDS AS ART BLUBB is ideal for use on safari.)

When working off a beanbag, it is very difficult to follow moving subjects and pretty much impossible to photograph birds in flight, even large, slow-flying ones. For years, folks have struggled—with limited success for the most part—to come up with an easy way to use

Leopard, Seronera River, Serengeti, Tanzania

Canon 500mm f/4L IS lens with EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/200 sec. at f/8. Fill Flash at -2 stops with Better Beamer.

Our driver put us in perfect position to photograph this gorgeous predator as it sought shelter from the early afternoon heat.

Grey-crowned Crane in flight, Ngorongoro Crater, Tanzania

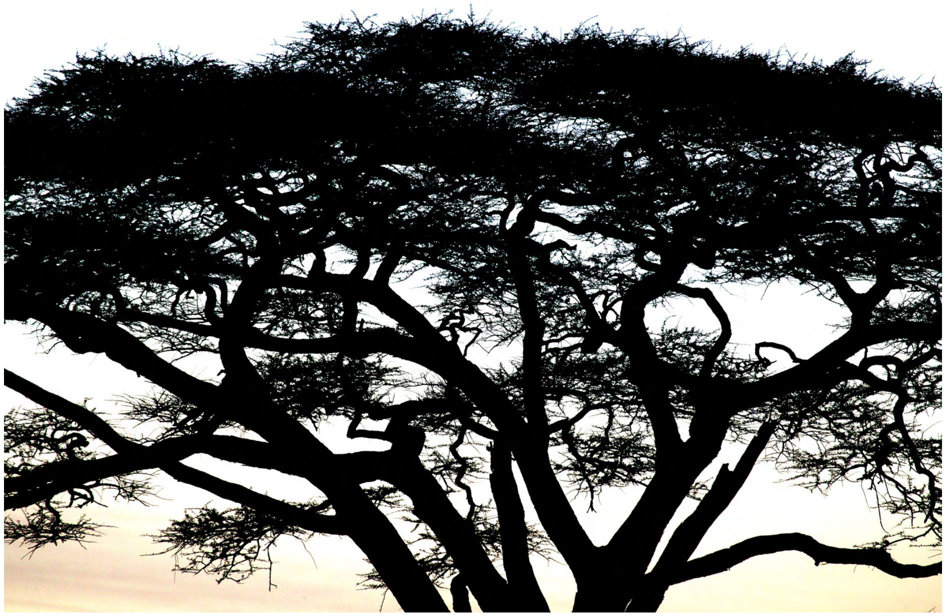
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds, ISO 200. Evaluative Metering +1/3 stop: 1/1250 sec. at f/5.6.

The Todd-Pod makes it possible to follow action when using a Wimberley head atop many types of safari vans.

the Wimberley head atop a safari vehicle with a super-telephoto lens. In some safari vehicles, the Groofwin Pod with a Wimberley head is a viable solution, but in many vehicles—especially the extremely popular Land Rover Defender, the design and configuration of the Groofwin Pod render it unusable. In 2002, friend and safari-tour organizer Todd Gustafson created the Safari Todd-Pod, a mount that was ideal for use atop a wide variety of safari vehicles and enabled photographers to enjoy the ease of lens handling that comes part and parcel with the use of a Wimberley head. The Safari Todd-Pod is available only on special order from BIRDS AS ART.

Though being prepared is a plus in all types of nature photography, being prepared while photographing on safari offers many advantages. After each photographic opportunity, be sure to check all of your camera settings. I make sure that evaluative metering is set to zero, that is, with no compensation value set. I check—depending on the next probable scenario—to see that either the central sensor or all 45 AF points are activated. And if using flash, I make sure that the fill level is set to –2/3. And I do that for both my big lens rig and for my auxiliary setup. Windows open? Check. Everything secure? Check. To secure the big lens while standing in the open roof hatch, I place one forearm atop the Todd-Pod and grab the roof rail with that hand. I grab either a hatch frame or the rail opposite my first hand-hold—this makes it easier to maintain control should the vehicle encounter a grass-covered animal burrow or an unexpected deep rut. With this checklist complete, I am ready to begin photographing the instant the vehicle comes to a stop. If I need my intermediate telephoto, I make sure to wait until the vehicle stops rolling before letting go of the Todd-Pod and grabbing the handheld outfit.

Whatever method of support you are using, there is another precaution that one must take when working atop a safari vehicle, especially when working with a Wimberley head. When you remove the camera body to change add or remove teleconverters, your big lens becomes front heavy. If the vehicle is tilted towards your side of the road, the situation becomes exacerbated, and if you are using a Wimberley head, you need to be even more careful. The danger lies in the fact that since your lens is front heavy, it might fall off the top of the vehicle and smash into the road some six feet below. To avoid this when working on a beanbag, be sure to pull the lens well back so that the center of gravity of the lens ***without the camera body*** rests on the beanbag. When using a Wimberley head, it is imperative that you tilt the front of the lens upward and then securely tighten the swing arm knob. Simply locking the swing arm knob may not be precaution enough especially if vehicle is tilted somewhat. Several times on my 2003 Tanzania trip I was able to grab my 500 IS while it was on its way over the side! Remember, safari time is precious and serious mistakes are to be avoided at all costs.



Acacia tree silhouette, Ndutu, Serengeti Plains, Tanzania

Canon 100-400mm L IS zoom lens (tripod-mounted at 400mm) with EOS-1Ds. ISO 800. Evaluative Metering -1/3 stop: 1/100 sec. at f/8.

The 100-400 is an extremely versatile lens that can be used in a variety of ways on safari. I had hoped for a real sunset for my obligatory acacia tree silhouette, but when it failed to materialize I opted to make soup from a stone...

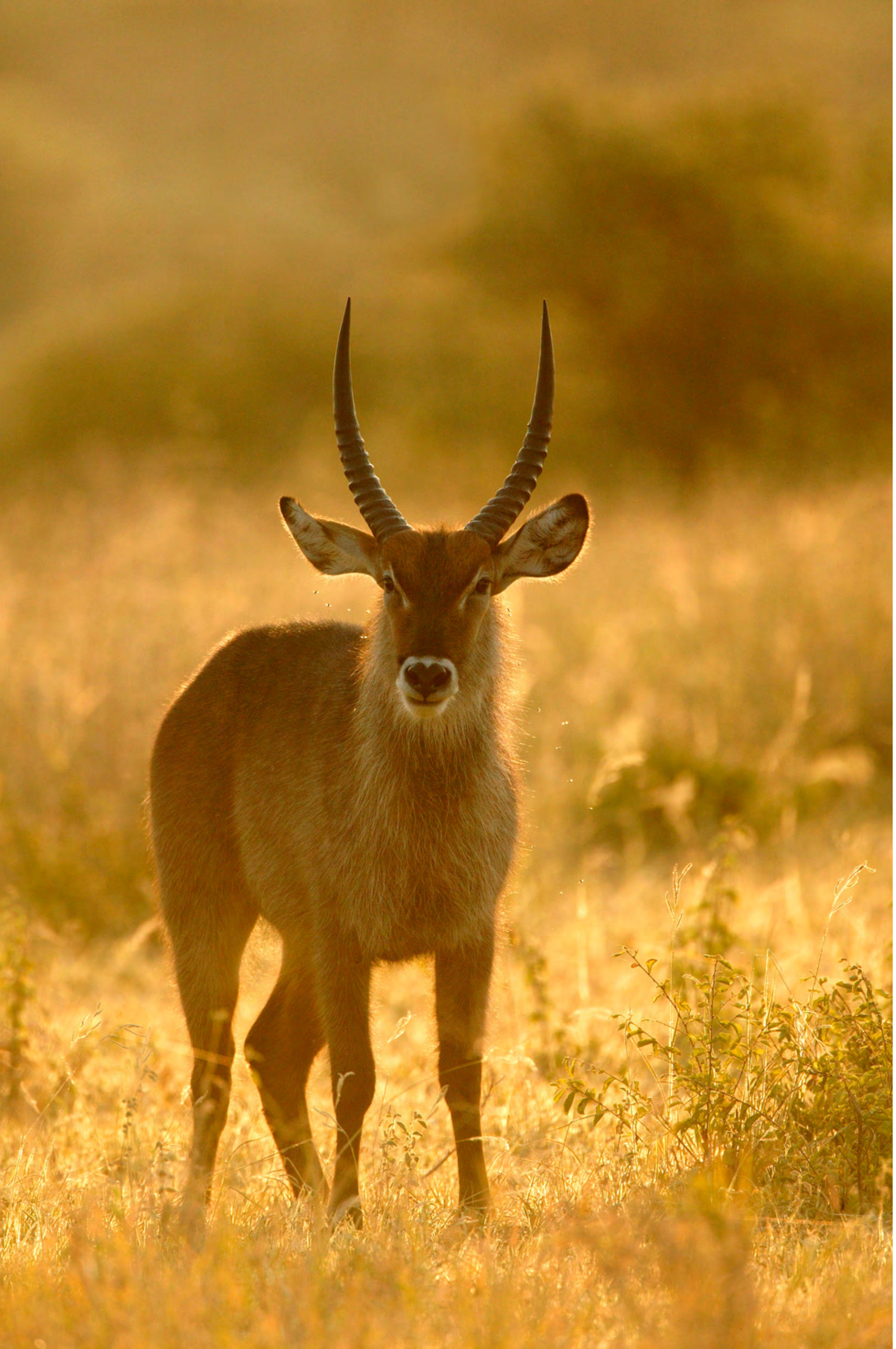
Safari

Gallery

Cape Buffalo urinating after mud bath, Ngorongoro Crater, Tanzania

Canon 100-400mm L IS zoom lens (handheld at 160mm) with EOS-1D, ISO 400. Evaluative Metering -1/3 stop: 1/1600 sec. at f/5.6.

One of the great joys of being on safari is never knowing what you will stumble onto. We were headed back to the lodge late one afternoon at Crater when we came upon several Cape Buffalo just finishing their mud baths. Once again, we see that having an intermediate telephoto zoom lens on safari is a must. With bright sun and a large very dark subject, some underexposure is generally required to avoid burning the highlights.



left:
Common Waterbuck
Tarangire National Park, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/500 sec. at f/5.6

When you are on safari, it is important that you speak up when you see a subject that you would like to photograph. You will need to speak loudly because the roads are rough and the vehicles open and noisy, but it is possible to do so without being rude or bossy. When I suggested that we stop for this backlit waterbuck, Todd, who has tons more African experience than I do, shrugged off my request, so I said firmly, "No. Let's stop for a minute." Though we stopped only for a minute or two, I was rewarded with a wonderful image.

right:
White-naped Raven
Ngorongoro Crater, Tanzania

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1D. Evaluative Metering -2/3 stop: 1/400 sec. at f/5.6.

Lunch at the picnic area in Crater is always exciting. The Yellow-billed Kites are always present, but not so this species, which is also looking to steal your box lunch. Though both of these species are rather bold, I stalked this individual very carefully so that I could make a head portrait with a relatively short effective focal length, in this case, 520mm (400mm X the 1.3 multiplier effect of the 1D).

Yellow-Billed Oxpeckers hitching a ride on the back of a Common Zebra, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/11.

Here, limited to the central sensor only with the 2X , I was glad that the second bird was present to balance the composition.

right: **Common Zebra chewing, Maasai Mara, Kenya**

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/8.

far right: Common Zebra staring, Amboseli National Park, Kenya

Canon 500mm f/4L IS lens with 1.4X TC and EOS-1v. Fuji Velvia pushed one stop to ISO 100. Evaluative Metering -1/3 stop: 1/250 sec. at f/8.

Though the basic composition of these two images is virtually the same, they are totally different images. On the left, it is the chewing action that puts a smile on folk's faces. On the right, the zebra in the background adds interest. Note that with the image on the left, with the soft light and the light-toned background, I added 1/3 stop of light to the exposure, but with the bright light and overall darker background of the image on the right, I needed to subtract 1/3 stop of light to avoid burning the highlights.

both pages: Zebra stallion mourning mate, Ndutu, Ngorongoro Conservation Area, Tanzania

above: Canon 100-400 mm IS L zoom lens (at 135mm on beanbag) with EOS 10D. ISO 400. Evaluative Metering -1/3 stop: 1/100 sec. at f/14.
facing page: Canon 500mm f/4L IS lens with EOS-1D. ISO 400. Evaluative Metering +2/3 stop: 1/500 sec. at f/5.6.

We first came across the dead mare alone on the plains. Soon, her stallion came by and began to nuzzle her. Though we are cautioned not to anthropomorphize (to assign human feelings to animals) it was obvious that he was mourning his mate's death. The love and tenderness that he showed was quite remarkable. Soon, the vultures and hyenas began to gather, and at first, he was able to fend them off.

Vulture scavenging zebra mare, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 500mm f/4L IS lens with EOS-1D. ISO 400. Evaluative Metering +2/3 stop: 1/500 sec. at f/5.6.

I was so engrossed in what was happening that I did not notice that I had made a series of images at +2/3 when I should have been using the metered exposure. I saved them by converting them darker. Had I been using J-PEG I would not have been able to save the images.

right: Zebra stallion mourning mate,

Canon 100-400 mm IS L zoom lens (at 135mm on beanbag) with EOS 10D. ISO 400. Evaluative Metering at zero: 1/125 at f/11.

below: Vultures engulfing zebra carcass

Canon 28-135mm IS lens (handheld at 35mm) with EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/500 sec. at f/11.

The stallion's presence kept the scavengers at bay for a while, but eventually the mare's body was totally hidden beneath a pile of vultures. The stallion would trot a few hundred meters away only to return and chase off the offenders, which were of course, only doing their job: staying alive and cleaning up the plains.

left: “King of the Hill”

Canon 300mm f/4L IS lens with EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/500 sec. at f/11.

After the stallion would scare the vultures off the carcass, more and more birds would fly in so I switched to the 300 IS for flight photography. We had moved the van closer to the action. When this bossy vulture spread his wings and lowered his head threateningly, I was ready to make a good image.

right: “The Explanation”

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D. ISO 250. Evaluative Metering -1/3 stop: 1/2000 sec. at f/5.6.

Wes and Patti Ardoin were with me in the van on this fateful morning. We had been wondering aloud about the cause of the mare’s death. The other four vans had had enough after about three hours and left to have a very late in-the-field breakfast. I was not about to leave and Wes and Patti were OK with that, so we stayed as the vultures, Maribou Storks, and finally, the spotted hyenas tore away bits and pieces of the mare. In a moment everything became perfectly clear. As the hyena pulled the stillborn zebra foal from the mare’s womb, we realized that she had died during the birthing process.

In my more than two decades of photographing nature, I have never been as emotionally involved as I was that morning. As a widower, I identified with the stallion and watching him mourn the loss of his mate brought tears to my eyes.

Chapter V Advanced Sharpness Techniques and Creating Pleasing Blurs

Laughing Gull breeding plumage head portrait Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. Evaluative Metering at zero: 1/400 sec. at f/11 in Manual Mode.

When working with the 2X TC it is usually best to stop down to f/11 for a bit of extra depth of field and sharpness when you have enough shutter speed to do so safely.

To make a good photograph, you need to be able to control exposure, design a pleasing image, and make your images sharp when you want them to be sharp. Of those three, it is the latter that presents the greatest challenge for a majority of nature photographers, especially those using long lenses with teleconverters at slow shutter speeds. (For complete coverage of the factors that go into determining image sharpness, see Chapter 6 in *The Art of Bird Photography; The Complete Guide to Professional Field Techniques*.) Here, I will review the techniques that I have developed in the past eight years that enable me to create extremely sharp images.

For years, the standard advice for making sharp images with a big lens was to drape your left arm atop the lens barrel. I did that for many, many years but now I employ several strategies that are far more effective. In mid-December, 2005, I received the following e-mail from Dave Ross, my agent at Corbis. Dave reviews my submissions and selects the images that will be accessioned. Corbis is known throughout the industry as having extremely high standards for sharpness and image quality:

Hey Artie,
I'm almost through editing your latest submission and have to say that you have a strong group of really outstanding images here! I also am glad that you have diversified into shooting other animals in addition to your excellent birds. How are you getting such great detail and sharpness in the bird feathers and the bear fur? What sort of camera/lens setup are you using? Thanks for the great work!
Dave

I told Dave that nearly all of the images in the submission were created with my two 1D Mark II camera bodies and that I was using a variety of Canon lenses, most of them image stabilized. I commented that the lenses that I use are the very same lenses that most other wildlife photographers were using, but that I employed a variety of advanced techniques to ensure maximum sharpness.

I will share these simple techniques with you on the pages that follow.

Review of Essential Sharpness Techniques

1. Select and use an adequate tripod with big lenses. I own and use four Gitzo 1325 Carbon Fiber tripods and recommend them for all intermediate and super-telephoto lenses except the Nikon 600. As this lens does not feature VR, I suggest that folks use the larger, heavier Gitzo CF 1548 with it. I absolutely advise against any of the Gitzo tripods lighter than the 1325 because the bottom leg sections are too thin (pencil-thin in fact). I include all of the following on my do-not-buy list: all of the Gitzo 1200 and 2200 series tripods as well as the 1348 and 1349.

2. Always, always, always take the time to balance your rig by sliding the lens plate forward or back as needed. And your outfit needs to be rebalanced every single time that you add or remove a teleconverter, extension tube, flash, or other accessory. Failure to balance the camera-lens-accessory combination is one of the main causes of unsharp images. I have come across countless folks on various IPTs who just cannot seem to incorporate this vital step in their set-up routines despite my advice and continued pleadings.

3. Work in Av mode and use the wide-open aperture unless you can verbalize a reason for stopping down. This will ensure that you are using the fastest possible shutter speed for a given ISO.

4. If you are using digital capture, do not neglect the higher ISOs as they will provide additional shutter speed (and thus yield sharper images). I would venture that the most common ISO used to create the images in this book would be ISO 400. If in doubt about your shutter speed, it is almost always best to raise your ISO setting a few notches.

5. By locking down the swing arm and the vertical pan on the Wimberley head you will maximize image sharpness but will lose many opportunities to create images that depict action or behavior. To tighten or not to tighten. That is the question. In general I tend to lock down the Wimberley head if the shutter speed is below 1/250 second and tend not to tighten the controls with shutter speeds faster than 1/250 sec.

6. When working at shutter speeds below 1/250 sec. make sure that your tripod legs are fully spread and that the leg tabs are flush against the stops.

7. When using one of the four Canon image stabilized super-telephoto lenses on a tripod, leave IS on and always choose IS mode 2. IS mode 2 performs exactly like IS 1 mode except when and only when you are photographing a static subject from a moving vehicle... Haven't done that in a while, have you?

8. Always press your face firmly against the back of the camera while holding the camera firmly in your right hand. Never use a cable release with a long lens.

The Standard Static-Subject Grip

It is a matter of habit: I use this grip more than 95 percent of the time when photographing static subjects. I grab the front end of the P-40 plate (with the 500mm lens) or the P-50 plate (with the 600mm lens) firmly with the last three fingers of my left hand and push up on the lens with the forefinger and thumb on that same hand. I put enough pressure on the lens to take the play out of the lens barrel. You can see that I am using quite a bit of pressure by looking closely at the fingertips of the ring and pinkie fingers on my left hand in the photograph below. This grip also works well when using a ballhead. I use the Standard Static-Subject Grip whether or not I have taken the time to tighten the two Wimberley head knobs. Note that another huge disadvantage of using a side-mounting gimbal head with a big lens is that you cannot use this grip to maximize image sharpness.

Photo by Jim Litzenberg

The Standard Action-Subject Grip

When panning to follow birds in flight or when photographing bird behavior or birds in action, I hold the swing arm in my left hand with the last three fingers draped lightly around the shaft and the forefinger of that hand on the platform shaft. Doing so allows me to use my "trigger finger" to help guide the lens while following the subject or subjects. In addition, it allows for smoother panning, which in turn yields sharper images.

Some folks like to place their left hands atop the swing arm in flight and action situations. This allows for easy panning but I believe that the extra support given by having the index finger of your left hand on the platform shaft (while using the Standard Action-Subject Grip) will yield slightly sharper images over the long haul.

Photo by Jim Litzenberg

Red-shouldered Hawk with prey
Indian Lake Estates, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/640 sec. at f/8.

On the afternoon that Jim and I went down to the lake by my office-home to make the sharpness technique images in this section, two red-shoulders flew right over our heads, one carrying some sort of aquatic prey. When the bird landed atop a tall pole, I went to work. I did not want to lock down the head so I used the Elevated-Subject Grip to stabilize the lens. This allowed me to re-frame constantly as needed. I had been using f/11 for a bit of extra sharpness but was glad that I opted for the additional stop of shutter speed when the bird suddenly swallowed the rear end of its prey.

The Elevated-Subject Grip

When pointing the lens up while working with birds high in trees or otherwise well above my position, my forefinger cannot reach around the platform shaft to grip it. Instead, I insert the end of the forefinger into the hollow at the base of the shaft and use that finger to stabilize the lens or to help with panning as needed.

Photo by Jim Litzenberg

The Elbow-Lock Maximum Sharpness Technique

I use this technique only when I am photographing a static subject with either very slow speeds (in the 1/15 to 1/100 sec. range) or when using stacked teleconverters. And though this may look like the old “drape your elbow atop the lens” trick, it is anything but. First, I frame the subject and tighten both of the Wimberley knobs. Then I place my left elbow flush up against the bottom of the swing-arm knob and then wrap my forearm around the lens as far as possible. Next I pull down smoothly but forcefully with my left hand while pushing up with my left elbow as if I were attempting to straighten my left arm. At the same time, I pull down smoothly but forcefully on the camera body with my right hand. As always, my face is pressed tightly against the back of the camera. The entire outfit is now pretty much in a very tight vice grip. The framing usually comes out in the wash, that is, the downward forces and the upward forces pretty much balance out, leaving the subject properly framed.

Photo by Jim Litzenberg

Secretary Bird
on nest
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with stacked 1.4 II and 2X II TCs with EOS-1D Mark II. Evaluative Metering +1 stop: 1/320 sec. at f/10.

Here, I used the Elbow-Lock Maximum Sharpness Technique while working on a Todd-Pod from atop a safari van. The sharpness attained here at effective 36.4X magnification is astounding even to me. I needed to add 1 full stop of light because of the soft, early morning light. I was able to make one really sharp image out of about a dozen.

Little Lens on Big Lens Technique

I am often in the field with a big tripod-mounted telephoto and an intermediate telephoto lens, the latter hanging from my shoulder via the camera body strap. When the light gets low or when I need some extra depth-of-field, I will often tilt the big lens towards the sky at about 40 degrees, lock the controls, and rest the smaller lens on the base of the lens barrel of the larger lens. Then I reach around the camera that is mounted to the big lens and support the front end of the barrel of the shorter lens with my left hand as shown below. This will get you an extra stop or two of either shutter speed or aperture as needed, whether you are using an IS lens or a non-IS lens.

Photo by Jim Litzenberg

Intermediate Telephoto Lens on Mongoose (or Ballhead) Sharpness Technique

When using an intermediate telephoto lens on a Mongoose M-262, as I do so often at Bosque, resting your left forearm on a leg of the tripod and supporting the front of the lens barrel with your left hand will allow you to follow your subjects easily and the extra support will yield sharper images, whether you are photographing birds in flight or static subjects. Though I use various intermediate telephotos and telephoto zooms on the Mongoose to create bird-scapes, I almost never tighten the controls; with lenses in this class on a tripod I usually have no problem creating sharp images even when using slow shutter speeds. When using a ballhead, ***grip the plate*** as shown in Standard Static-Subject Grip.

Photo by Jim Litzenberg

With some study and lots of practice, most folks can learn to make sharp images with big lenses and teleconverters, especially with the Canon image stabilized super-telephoto lenses or the Nikon 200-400 VR. Strangely enough, some folks have trouble for a week or two making sharp images with their big new lenses and a 2X teleconverter, but talk to them in a month and they have a hard time figuring out why they had a problem.

Do remember that the images that come out of digital cameras appear soft. All digital images need to be sharpened, but only after being sized for final usage. A small J-PEG intended for e-mail or web use needs much less sharpening than a file for a 20” x 30” print. It is fine, however, to selectively sharpen a bird’s eye or face before saving your master file. See the details on sharpening in Chapter 3.

Some folks are totally hung up over sharpness issues. “This lens is not sharp wide open.” “You cannot possibly make truly sharp images with any teleconverter, even a 1.4X.” “Which is sharper, this lens or that?” I have gotten so tired of answering these and similar questions that I recently began telling folks that I have devised the ultimate sharpness test, the signature test. When they ask, “What the heck is the signature test for sharpness?” I tell them, “When someone signs the check to pay me for using an image. *That* proves to me that the image was sharp enough.” Michael Reichman of Luminous Landscape (http://www.luminous-landscape.com/) says “Most lenses are better than most photographers.”

Over the next few pages, we will take a look at some sharpness issues encountered in specialized situations.

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Nubian Vulture

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/640 sec. at f/8.

To create sharp images with compositions similar to this, you can use One-Shot AF, focus on the bird’s eye, and recompose. (With a pro body, an f/4 lens, and the 2X TC, only the central sensor will be active.) An alternative would be to use Custom Function 4-3. Your last option would be to focus manually. Though I almost always rely on autofocus, some folks get great results by using manual focus with static subjects.

Making Sharp Images From Your Vehicle

When working from the car, there are several options for supporting your outfit. Most are described on pages 120-121 of *The Art of Bird Photography; The Complete Guide to Professional Field Techniques*.

In 2003, I developed a design for the ultimate big lens beanbag but I was unable to get it manufactured. In late 2005, I finally hooked up with John Stanford, founder of Vested Interest. (John eventually sold the business to John Storie who now custom-produces the fabulous X-tra Hand vests.) After testing several prototypes, we came up with the perfect design, the BIRDS AS ART Big Lens Ultimate Beanbag (seen in the photo at left).

When you are working with a big lens from inside a vehicle, this beanbag makes it easy to produce sharp images with teleconverters at slow shutter speeds. It provides an extremely solid base from which to work. When using autofocus, simply rest the lens barrel atop the beanbag after draping the bag over the window as shown below. If you are in a situation where you will likely be following birds or animals in action, or where you need to focus manually, it is best to mount the lens on a Panning Ground Pod and then place the entire rig atop the Big Lens Beanbag. The base of the ground pod seats solidly on the deep concave upper surface of the beanbag; with this setup, it is easy to follow wildlife in motion and even birds in flight. When using any beanbag it is best to raise and lower the window as needed depending on the location of the subject. If the subject is on the ground close to the car, you will need to roll the window all the way down. If the subject is perched well above eye-level, or if you are attempting to photograph birds in flight with the Panning Ground Pod, you will want to raise the window.

Above: The 500IS on the Panning Ground Pod atop the BAA Big Lens Ultimate Beanbag, the BLUBB. The stability and smooth panning achieved with this setup are astounding.

Above right: When out of your vehicle but hiding behind it, you can place the beanbag upside down on your car's roof or hood (as shown).

Right: Using your car as a blind can help you get close to lots of normally wary birds and wildlife, and using the BAA Ultimate Big Lens Beanbag can help you make sharper images consistently.

Making Sharp Images on the Ground

When you are working on the ground, it is usually easier to create sharp images than if you are working off of a tripod, because the earth itself is a pretty solid support. If you are working with a Panning Ground Pod, the key to making sharp images is to work the ground pod into the sand or earth a bit while making sure that you have maintained the framing that you want. It is important to realize that you point the lens up or down to the subject in roughly the same manner; often I need to dig the front of the ground pod in a bit in order to get the lens down to the subject. When working with a Skimmer it is more difficult to create a solid base unless you are working in soft sand. It is difficult or impossible to "dig in" with a Skimmer when using it on firmer surfaces because of the large, flat bottom. If you are working without any type of ground support, you will need to dig the foot of the lens into the sand or earth as before. The problem here is that you will be working from a position that is several inches lower than if your were working off a Panning Ground Pod or a Skimmer. In all of the above instances, the last step is to square your camera to the world by rotating the lens in the tripod collar and checking your bubble level. I consider the use of a Double Bubble absolutely mandatory when working at ground level because your eye will be totally skewed to the viewfinder whenever you are working on the ground.

Long-billed Curlew
Fort DeSoto Park, FL

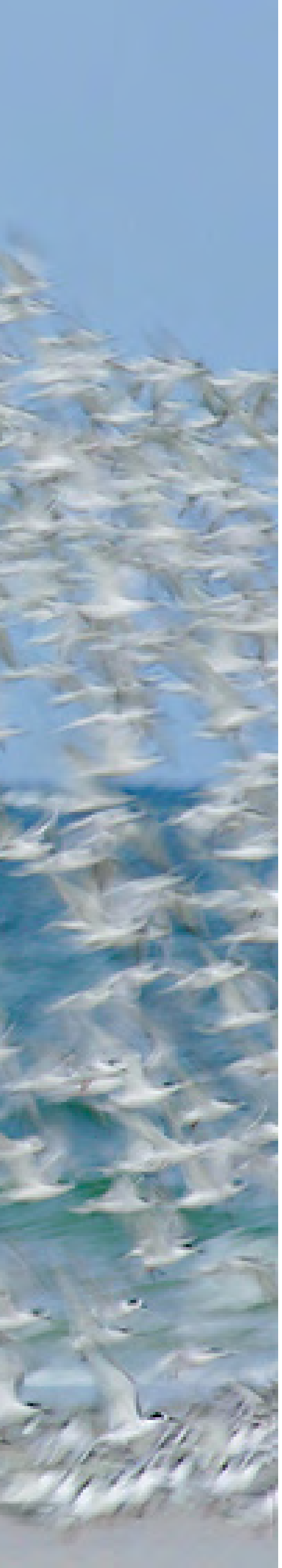
Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/5000 sec. at f/4.

All modern cameras have wide open viewing. Even if you are stopped down to f/22, you see the image at the wide-open aperture. Folks often worry about having enough depth of field to "cover" the bird without realizing that if the entire bird, including the near-wing, looks sharp in the viewfinder, it will be sharp in the image! Here-- knowing that I had the whole bird covered depth of field-wise--I chose to work at f/4 to ensure an extremely soft background.

Willet, winter plumage, bathing, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC (on panning ground pod) and EOS-1D Mark II. ISO 400. Eval. Metering +2/3 stop: 1/250 sec. at f/11.

When working at ground level, I dig my ground pod into the sand to increase stability before making a single image. It was surprising to me that I froze the drop of water on the bird’s back with the relatively slow shutter speed.



Creating Pleasing Blurs

Whenever I see moving birds in low-light situations, I think blurred images. The bigger the groups, the better. (You can, of course, make blurred photographs of single birds in motion.) Your first concern when thinking blurs should be shutter speed. For that reason I recommend working in Tv mode so that your control of the blur speed can be absolute. In most situations, your blur speeds will range from 1/8 to 1/125 sec., though at times you can work much slower: as slow as 1 second. In anything but low-light situations, you may have to lower your ISO to reach the desired shutter speed. And in some cases, you may need to add either a polarizer or a neutral density filter to the mix to get as slow as you want to.

Even before you choose your shutter speed, you need to consider the distance to your subject or subjects. The farther from the birds you are, the less the effective blur will be at a given shutter speed. If you photograph a flapping goose at close range with a shutter speed of 1/8 sec., the result will be a mushy mess. Nobody would have an idea that the subject was a bird. On the other hand, if you photograph a distant flock of flapping geese at that same shutter speed (1/8 sec.) with a 600mm lens, the birds will be rendered as relatively sharp. For single birds fairly large in the frame, think shutter speeds in the 1/30 to 1/125 sec. range. With careful panning at those speeds it is possible to create pleasing blurs that feature the bird's near-eye sharp. For large relatively distant flocks in flight, you can work with shutter speeds from 1/8 to 1/30 sec., or go even slower when photographing flocks at great distances.

The next consideration to be made: To pan or not to pan? I almost always pan when creating blurred images. By panning with moving subjects, the degree of blur is reduced. And if the background is other than sky and you are using a fairly slow shutter speed, your images will exhibit the pan-blurred background look and streaks of color. If you are panning with one group of birds and you see another group of birds in the background flying in the opposite direction, make a few images. The birds flying in the direction of your pan will be rendered rather sharply, while the birds in the background will be extremely blurred. Along these same lines, you can try panning opposite to the direction of flight.

If you decide not to pan, the degree of blur will be increased. You can hold the lens still, acquire focus (or focus manually), and then let the birds fly through the frame to create the blurring. This technique works well when you are using a tree or another strong element in a corner of the frame as a compositional anchor. You can use shutter speeds a bit faster than usual when using this strategy.

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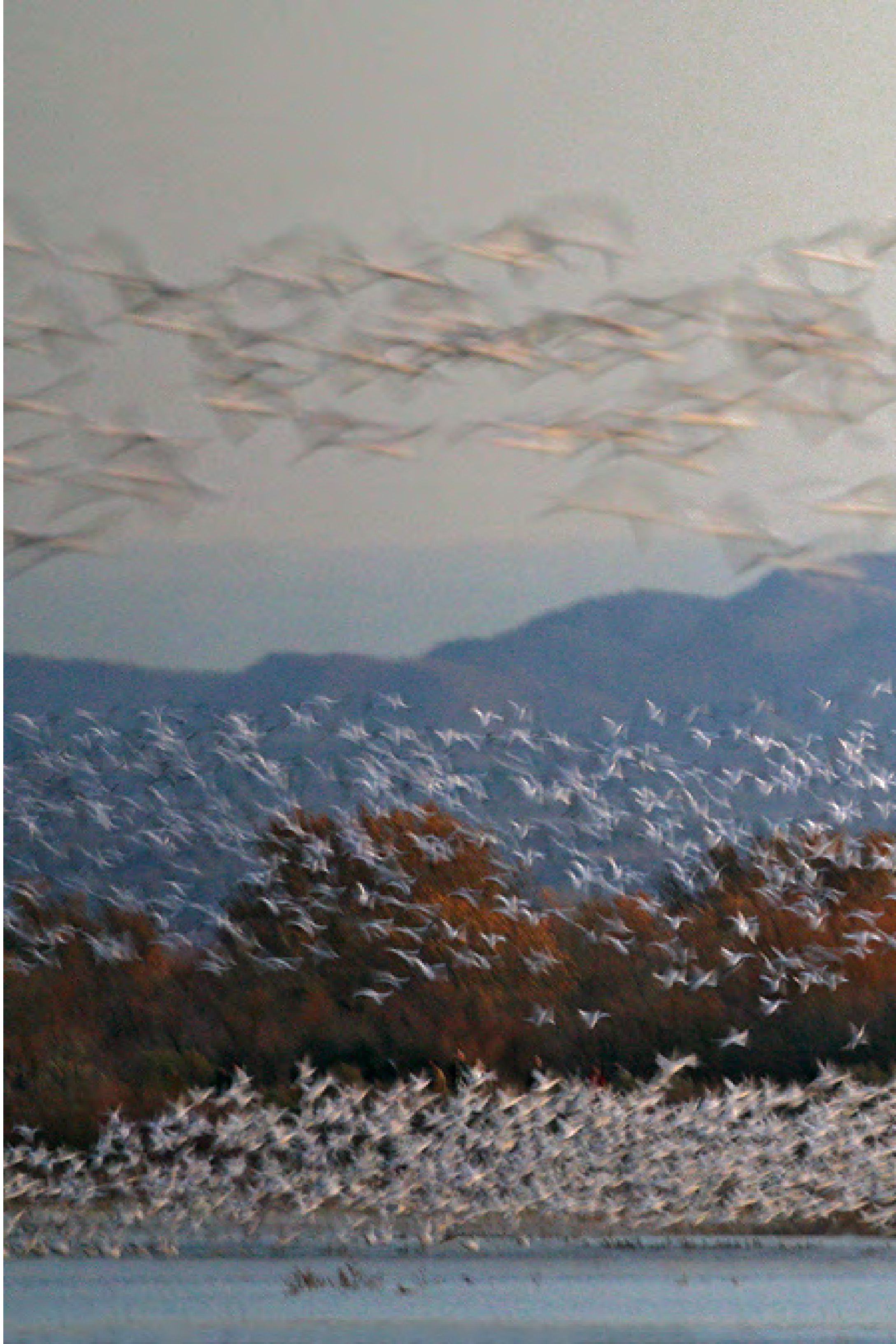
Common and Sandwich Terns, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 100. Evaluative Metering +2/3 stop: 1/20 sec. at f/32.

I have been totally in love with creating pleasingly blurred images since I began using digital capture full time in November 2002. By panning with the motion, the eye patches of many of the birds were sharply rendered. This adds interest to the image.



Snow Geese, Bosque Del Apache NWR, NM

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 800.
Evaluative Metering at zero: 1/8 sec. at f/4.

This is one of my favorite images from Bosque 2005. Notice that the closer birds, the ones in the sky, are much more blurred than the birds that are farther away. Conversely, the more distant birds at the bottom of the frame are relatively sharp even at 1/8 sec. I left the 600 in the car as I hustled up onto the Eagle Scout deck. Over the years I have come to believe that when given a choice of two lenses at Bosque that wider is often better...

Snow Geese, blue sky blast-off, Bosque Del Apache NWR, San Antonio, NM

Canon 70-200mm f/2.8L IS zoom lens (handheld at 105mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/6 sec. at f/5.6.

Working in Av mode with a sky full of birds as I did here, you can begin making blurs at the wide-open aperture and then choose a smaller aperture without taking your eye from the viewfinder by rolling the dial with the forefinger of your right hand. Smaller apertures = slower shutter speeds.

Snow Geese, pink take-off, Bosque Del Apache NWR, San Antonio, NM

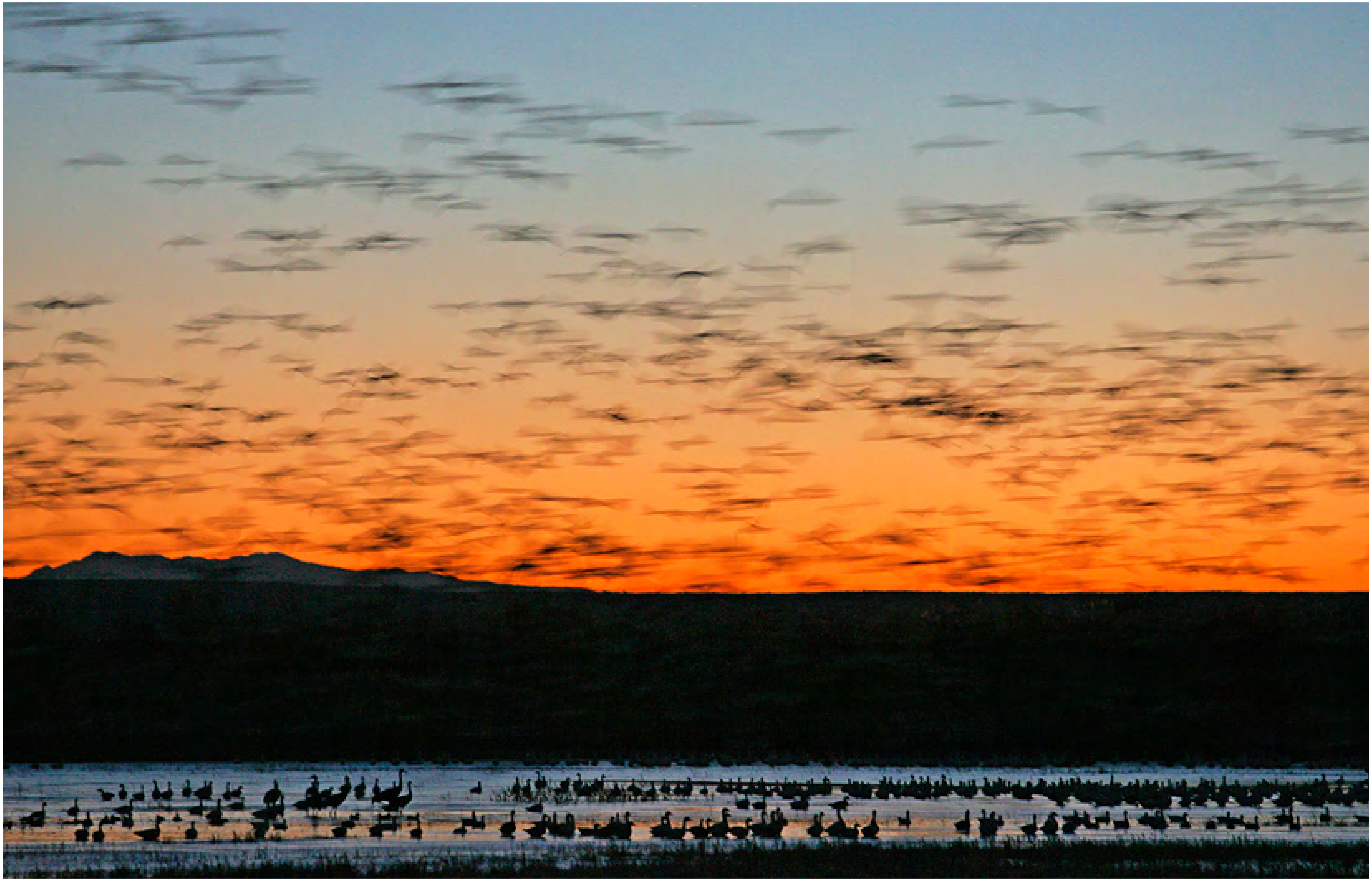
Canon 70-200mm f/2.8L IS L zoom lens (on Mongoose M262 at 173mm) with EOS-1Ds Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/25 sec. at f/2.8.

When the geese are close to the road in the predawn, check the wind direction. If the birds will be coming toward you, as they did this day with the wind from the northwest, put the big lens away and grab something shorter.

Snow Geese, clear sunrise, Bosque Del Apache NWR, NM

Canon 70-200mm f/2.8L IS lens (on Mongoose M-262 at 120mm) with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/10 sec. at f/4.

Here I panned with the flock, blurring the birds in the impoundment and giving this image a totally different look than the one on the facing page.



Snow Geese, clear sunrise, Bosque Del Apache NWR, NM

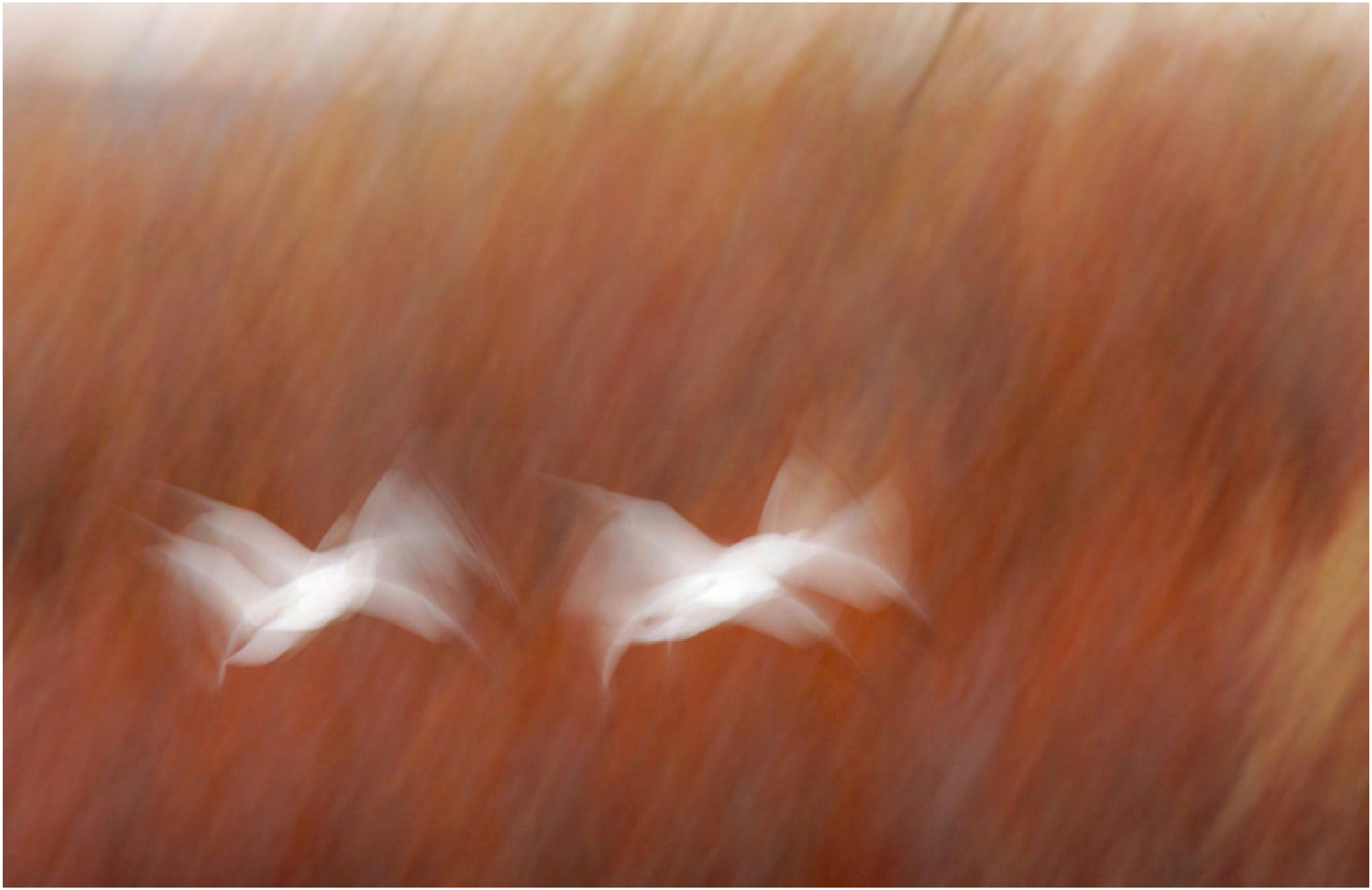
Canon 70-200mm f/2.8L IS lens (on Mongoose M-262 at 200mm) with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/8 sec. at f/4.

Here I focused on the first row of birds in the water, framed the image using the distant mesa as a compositional anchor, and let the birds fly through the frame. If you want to catch peak color on clear mornings, you need to be in place an hour before sunrise so that you have enough time to set up.

Snow Geese, yellow-blue clear sunrise, Bosque Del Apache NWR, NM

Canon 28-300mm IS L lens (on Mongoose M-262 at 28mm) with EOS-1Ds Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/30 sec. at f/4.

When creating scenic blurs, strive to include the entire flock in the frame if at all possible. You can clone out a few birds from the frame edges if need be.



Snow Geese, red bush blur, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark IIN. ISO 800. Evaluative Metering at zero: 1/3 sec. at f/16 in Manual Mode.

It was the color of the bushes here that got me thinking "surreal blur." Panning upwards yielded a bit of pan-blur background streaking.

Snow Geese
Pano blast-off blur
Bosque Del Apache NWR, NM

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/20 sec. at f/4.

To make this image, it was first necessary to see the potential. There was a large flock of birds well back in the main impoundment. With the cottonwoods in the background, it was hard even to see the flock let alone visualize the blast-off that was coming. With the wind from the west, I knew that the birds would be coming towards us. Even though I alerted the group to the image, no one was able to grasp the concept, yet when they saw this panoramic crop they all wanted to know where and when I made it! It all happened right in front of them...

When working in really low light, I often work wide open in Av mode so that I can get the fastest possible blur speed.

I moved well left before making this image to eliminate the foreground cranes, but there was no way to come up with a clean lower edge. I cropped the foreground flock at the spot where the birds began to appear sharp.

Sandhill Cranes, pink sky and tree, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +2 stops: 1/15 sec. at f/11.

I wanted to create an image of the cranes passing behind the tree. Using AI Servo AF proved fruitless, so I simply used One-Shot AF, locked focus on the birds before they flew behind the tree, panned with them, and made lots of images as they flew behind the branches. This, my favorite: it gives the impression that the birds are flying right through the tree.

Snow Geese, immature, mild flight blur, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with EOS-1D Mark IIN. ISO 3200. Evaluative Metering +1 2/3 stops set manually: 1/60 sec. at f/4. Flash at -1 stop with Better Beamer.

This is a good example of the type of flight images that you can create with mid-range shutter speeds and flash. Note the perfect wing position.

Snowy Egret, Ding Darling NWR, Sanibel, FL

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1D Mark II. ISO 250. Eval. Metering -2/3 stop: 1/30 sec. at f/14 in Tv mode.

Here I like the balanced composition, the swirling background patterns, and the dark and foreboding mood.

Snowy Egret, pan blur, Ding Darling NWR, Sanibel, FL

Canon 100-400mm L IS zoom lens (handheld at 300mm) with EOS-1D Mark II. ISO 400. Eval. Metering -2/3 stop: 1/30 sec. at f/20 in Tv mode.

Here I failed to pan fast enough to keep the bird back in the frame, but was thrilled that my "error" introduced more of the really cool pan-blurred background that was serendipitously positioned ***behind*** *the bird.*

right:
Green Heron
juvenile with dragonfly
Indian Lake Estates, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/250 sec. at f/8.

As I made this image, the bird moved its head rapidly thus blurring its face, bill, and prey despite the 1/250 sec. shutter speed. In this instance, I chose to sharpen the eye by selecting and darkening both the iris and the pupil. Jim and I found a grown family of Green Herons on our morning health walks in May 2005.

left:
Reddish Egret, landing blur, Fort DeSoto Park, near St. Petersburg, FL

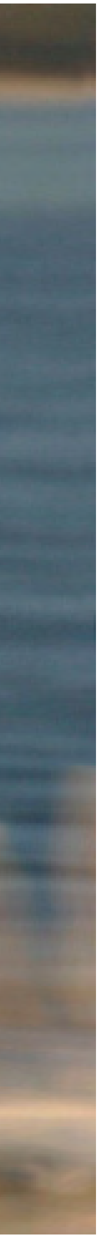
Canon 600mm f/4L IS L lens with EOS-1D Mark II. ISO 250. Evaluative Metering +2/3 stop: 1/15 sec. at f/29 in Tv mode.

I disagree with folks who state that all good blurred images of single birds need to have the eye or eyes sharp.

White Pelican, Placida, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 50. Evaluative Metering -1/3 stop: 1/13 sec. at f/29 in Manual Mode.

With wind against sun and the birds landing away from us, I went for an extreme blur and was pleased with the results. Note that I needed to drop down all the way to ISO 50 to get the slow shutter speed that I wanted: 1/13 sec.



Great Egret, blur with flash in white sky, Venice Rookery, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1 2/3 stop: 1/50 sec. at f/4. Flash at -1 stop with Better Beamer.

I just love creating flash blurs as soon as there is enough light for the camera to focus.

Common Zebras, Maasai Mara, Kenya

Canon 100-400mm L IS zoom lens (handheld at 125mm) with EOS-1D Mark II. ISO 100. Eval. Metering at zero: 1/15 sec. at f/25 in Tv mode.

I went with Linda Robbins during our lunch break to visit her favorite driver. Rather than sit in the van doing nothing, I opened the window and made some images while the vehicle was moving along at about 40 kilometers per hour.

Common Zebra and foal running, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS 10D. ISO 200. Evaluative Metering at zero: 1/25 sec. at f/22 in Av mode.

A quick way to ensure the slowest shutter speed at a given ISO when working in Av mode is to set the smallest aperture (as I did here).

Wildebeest, Maasai Mara, Kenya

Canon 300mm f/4L IS lens (handheld) with EOS-1D Mark II. ISO 125. Evaluative Metering +1/3 stop: 1/20 sec. at f/32 in Tv mode.

This is a standard pan-blur of a running animal. It is not uncommon to encounter long lines of running gnus. When you do, be sure to have the driver position the vehicle so as not to disrupt their movement.

Wildebeest, Maasai Mara, Kenya

Canon 100-400mm L IS zoom lens (handheld at 170mm) with EOS-1D Mark II. ISO 100. Evaluative Metering +2/3 stop: 1/15 sec. at f/25 in Tv mode.

This rather cave-painterly image was also made from a moving safari vehicle. I love the look of the grasses.

As you have learned in this chapter, making sharp images is a necessary skill that can be learned and practiced. Creating pleasingly blurred images on a consistent basis requires that you first understand the various factors involved in determining the degree of blur, and then design your images with great care all the while thinking outside the box and letting your imagination run wild. One of the major themes of this book is that digital capture allows folks to experiment with a variety of creative techniques, and working with slow shutter speeds is number one on that list for me.

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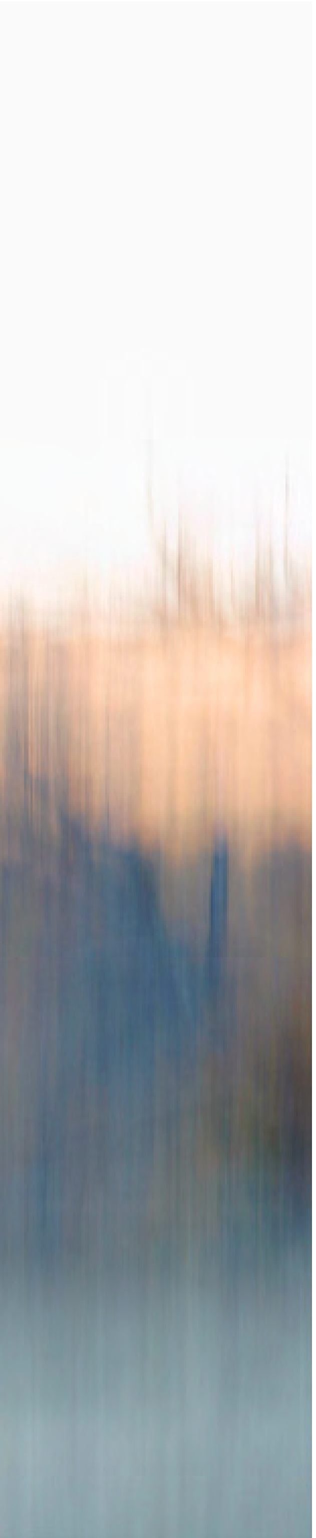


Cottonwoods at dusk
Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 50. Evaluative Metering +1/3 stop: 1/5 sec. at f/9.

To create this image (at Harry's Crane Pool while waiting for the full moon to rise), I panned the camera vertically after locking the Wimberley head's panning knob. I would make an image, check it on the LCD, and decide if I needed to pan faster or slower. Another variable was the timing of the shutter release, which determined the position of the horizon line.

Chapter VI

Exposure and Flash Simplified & Autofocus Essays

With digital photography taking the world by storm, the need for photographers to have a complete understanding of exposure theory—as they did when using color slide film—no longer exists. They can simply make an image, check and evaluate the resulting histogram, adjust the exposure if need be, and then produce perfect exposure after perfect exposure as long as the light level remains constant. The only problem with that plan occurs when you are faced with a once-in-a-lifetime situation that lasts only a few seconds. When you have only one chance to get it right, you had best get it right. In addition, if you do blow the highlights you may lose a great pose here and there before you get the exposure right. And if you underexpose considerably for whatever reason you increase digital noise and greatly reduce the amount of color information contained in your files. To make things easier for everyone, I have revamped and simplified my method of teaching exposure on IPTs and at seminars. If you would like to gain a complete understanding of exposure theory—and I recommend that all serious photographers do just that—please see Chapter Three in *The Art of Bird Photography: The Complete Guide to Professional Field Techniques*.

Canada Goose
gosling eating dandelion
Pt. Pelee National Park
Leamington, Ontario

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/200 sec. at f/8. Fill Flash at -1 stop with Better Beamer.

With a middle-toned bird and a middle-toned background, the evaluative meter reading will yield a good exposure at either the metered exposure (0) or at +1/3 stop.

Exposure Simplified

Here are the basics.

Get in the habit of working in Av mode and adjusting the exposure suggested by your camera's evaluative or matrix meter reading by dialing in exposure compensation. If the background tonality is changing constantly, learn to work in Manual Mode and to adjust your exposure via the analog exposure scale in the viewfinder. By doing so and then checking the histogram, you will always have the correct exposure for the ***subject*** regardless of the tonality of the background (as long as the light level remains constant).

When the sun is at full strength, that is, on a clear day at least an hour after sunrise or at least an hour before sunset, your camera's evaluative or matrix meter is smart. It is rare in these conditions that you will need to compensate more than 1/3 stop in either direction.

When you are working in the shade, or when it is cloudy or overcast, or when the sun is at less than full strength, then your camera's evaluative or matrix meter is dumb. You will need to help it out in order to get the exposure that you want. The closer your scene is to white, the more you will need to help the meter by adding light to the suggested exposure.

1. If the sun is at full strength and what you see in your viewfinder averages to a middle-tone or lighter and there are no white or bright highlights, you can use the metered exposure.

2. If the sun is at full strength and what you see in your viewfinder averages to darker than a middle-tone and there are no white or bright highlights, you can use the metered exposure less 1/3 stop.

3. If there are bright or white highlights in #1 or # 2, use 1/3 stop ***less light*** than recommended above.

4. If you are working in the shade, if it is cloudy or overcast, or if the sun is at less than full strength and what you see in the viewfinder averages to a middle-tone, the best exposure will always be either the metered exposure or the metered exposure + 1/3 stop.

5. If you are working in the shade, if it is cloudy or overcast, or if the sun is at less than full strength and what you see in the viewfinder averages to lighter than a middle-tone, you will need to add light to the metered exposure to come up with a pleasing exposure. The lighter the scene, the more light you need to add.

For scenes a bit lighter than a middle tone, add 2/3 stop of light. For images well brighter than a middle tone, add 1 full stop of light. For images that average to white, add 1 1/3 stops of light. In white-out conditions add 2 full stops of light.

6. If you are working in the shade, if it is cloudy or overcast, or if the sun is at less than full strength and what you see in the viewfinder averages to darker than a middle-tone, use the metered exposure if there are no bright or white highlights. With bright or white highlights, use -1/3 stop.

Because of the wordy qualifications that needed to be included above, the principles may seem more complex than they really are. To simplify things even further, consider the following:

Situation #1- Sun at full strength, middle tone or brighter: 0.
Situation #2- Sun at full strength, darker than a middle tone: -1/3.
Situation #3- Sun at full strength, bright highlights against a middle-toned background: -1/3; against a dark background: -2/3.
Situation #4- Sun at less than full strength: 0 or +1/3.
Situation #5- Sun at less than full strength, lighter than a middle tone: +2/3.
Sun at less than full strength, well brighter than a middle tone: +1.
Sun at less than full strength, white: +1 1/3.
White-out conditions: +2.
Situation #6- Sun at less than full strength, darker than a middle-tone: 0.

In the examples that follow, we shall walk you through the reasoning for each exposure choice. By studying these examples and the captions that accompany each of the images in this book, you can learn to apply this rather simple system quickly and easily so that you can come up with a workable exposure in virtually all situations.

facing page:
Costa's Hummingbird, female w/pollen on crown
Yuma, AZ

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/500 sec. at f/11.

Situation #1: The sun is out and we have a middle-tone subject with a middle-tone background. The metered exposure yielded a perfect histogram and a perfect exposure.

Great Egret swallowing red-tide fish, Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1250 sec. at f/11.

Situation #1: With the sun shining brightly and the scene averaging to lighter than a middle tone, the meter is smart: there is no need to compensate. Red-tide fish kills can make for some great photography provided that you are not choking and gasping... (It is rare for a red tide to be that bad.)

Thunderheads over palmetto-scrub habitat, Lake Wales, FL

Canon 28-135mm IS zoom lens (handheld at 85mm) with EOS-1Ds. ISO 400. Evaluative Metering at zero: 1/1250 sec. at f/13.

Situation #1: Once again we have the sun out at full strength with the scene averaging to well lighter than a middle tone. The meter reading will give you a perfect exposure. Most folks, not realizing that the meter is right-on in these conditions, would have incorrectly added light.

Marine Iguana in tide pool, Santiago Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens with 1.4X II TC (handheld at 280mm) and EOS-1D Mark II. ISO 250. Eval. Metering -1/3 stop: 1/160 sec. at f/11.

Situation #2. With the sun at full strength and the dark blue water predominating, 1/3 stop of underexposure was needed.

Western Gull, breeding plumage adult, LaJolla, CA

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D. ISO 100. Evaluative Metering -1/3 stop: 1/800 sec. at f/8.

Situation #3. With the sun out and brilliant white against middle-dark blue, -1/3 stop will keep you from burning the whites. I've been teaching this simple exposure trick to folks for years with both film and digital: it works perfectly but only all the time!

Crested Caracara, Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/800 sec. at f/11.

Situation #3. Sun out, white highlights = -1/3 stop. I used One-Shot AF, focused on the eye (this locked the exposure), and recomposed. Note the middle-blue sky around the bird's head. With AI Servo AF, I would have used -2/3 stop because with the real time metering that comes with AI Servo AF there would have been lots more black in the metering area. (Real time metering means that the exposure is set when the shutter is released.)

Yellow Warbler, immature, Puerto Ayora, Santa Cruz, Galapagos, Ecuador

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 640. Evaluative Metering +1/3 stop: 1/250 sec. at f/7.1.

Situation #4: With no sun and the scene averaging to middle tone, +1/3 stop will always be perfect. Since I like to make images in soft light, +1/3 stop is one of my most commonly used exposure compensation settings.

Short-billed Dowitcher, winter plumage sleeping, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/500 sec. at f/11.

Situation #4: With very soft sun late in the day and the scene averaging to a middle tone (or a bit lighter), +1/3 stop was correct. If a cloud had covered the sun, I would have gone to +2/3. It would not hurt to have pointed the lens a bit more to the right here to move the bird closer to the frame edge.

Wilson's Plover, tight on body, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with two 25mm extension tubes and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/60 sec. at f/16.

Situation #4: With very soft light and a middle-tone (or a tad lighter) scene overall, +1/3 stop is called for. In many situations, choosing between one or two exposure compensations, in this case between +1/3 or +2/3, can be tough, but with digital either would yield an excellent master file.

Great Horned Owl, captive, Yuma Arizona

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/200 sec. at f/5.6.

Situation #4: With the bird in the shade and the scene averaging to a middle tone, +1/3 stop was the ticket. After a while, you will learn to recognize the quality and quantity of the light and the tonality of the scene so quickly that you will begin making your exposure decisions without even thinking.

Gyrfalcon, captive, Nome, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 400. Evaluative Metering +2/3 stop: 1/200 sec. at f/6.3.

Situation #5: On this cloudy afternoon, with the scene averaging to lighter than a middle tone, +2/3 resulted in a fine exposure. It's that simple. Note that to achieve the correct exposure for the bird here the histogram shows that the sky is overexposed and detail-less. I prefer that approach to underexposing the subject and then lightening it in Photoshop. In addition, I love the "white-sky" appearance; it looks as if the image were created in a studio.

Royal Tern, immature begging in flight, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +2/3 stop set manually: 1/640 sec. at f/7.1.

Situation #5: With the soft light and the scene averaging to lighter than a middle tone, I needed +2/3 to keep the whites white.

Willet, winter plumage, with spider crab carcass, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/1250 sec. at f/5.6.

Situation #5: On a cloudy-bright morning, with the scene well lighter overall than a middle tone, adding 1 full stop of light resulted in a pleasing exposure. Compare the overall tonality here with that of the image on the facing page. When the sun is in and the scene is light the meter is dumb...

above: Snow Goose in flight in rain, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 640. Evaluative Metering +1 stop set manually: 1/800 sec. at f/8.

Situation #5: With clouds predominating and the overall tonality well lighter than a middle tone, +1 was perfect. If I had used the metered exposure, the white goose would have been rendered gray.

left:
Sandwich and Forster's Terns, flock flight blur
Fort DeSoto Park, near St. Petersburg, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 125. Evaluative Metering +1 stop: 1/20 sec. at f/32.

Situation #5: Again, it is cloudy and the overall tonality is well lighter than a middle tone, so +1 stop yielded a great exposure and a perfect histogram.

Great White Pelicans, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/320 sec. at f/16.

Situation #5: With clouds, light blue water, and white birds, the scene averages to very much lighter than a middle tone. Though I used +1 here, I had to lighten the image a bit in Photoshop so +1 1/3 stops would have been a slightly better choice.

Long-billed Curlew, Fort DeSoto Park, near St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 320. Evaluative Metering +1 stop set manually: 1/500 sec. at f/5.6.

Situation #5: With the narrow strip of green across the top of the frame barely affecting the meter, the scene here averaged to well lighter than a middle tone, so +1 was best. I have advised folks for years, "On a cloudy day at the beach, add 1 stop of light for perfect exposures."

both:
Red-tailed Hawk, Bosque Del Apache NWR, NM

left: Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark IIN. ISO 400. Evaluative Metering +2/3 stop set manually: 1/250 sec. at f/10.

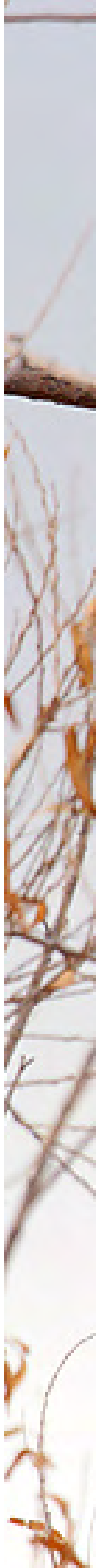
right: Canon 600mm f/4L IS lens with EOS-1D Mark IIN. ISO 400. Evaluative Metering +1 2/3 stops: 1/160 sec. at f/10.

both: Situation #5.

In the image on the left, the relatively dark subject takes up a fairly large portion of the frame. As a result, the image overall averages lighter than a middle tone. Adding "only" 2/3 stop of light resulted in an excellent exposure.

In the image on the right, the white sky takes up a far greater portion of the frame than in the image on the left, and the relatively dark subject is so small that it barely affects the meter reading at all. As the image on the right averages to nearly white, I added 1 1/3 stops of light.

Most folks, myself included, prefer the image on the right because of the patterns of the leaves included in the wider view. In bird photography, a longer focal length is not always the best choice.



Snow Goose, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering +1 stop: 1/250 sec. at f/6.3.

Situation #5: This looks like +1 1/3 compensation as it is an overall white image and the light is soft, but with the backlight I needed to protect against burning the rim-lit edges of the goose so I went with only +1 stop.

White Pelican, Placida, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/400 sec. at f/7.1.

Situation #5: With the soft light and the scene averaging to white, it was necessary to add 1 1/3 stops of light to keep the whites white.

Snow Goose, white flock blur, Bosque Del Apache NWR, FL

Canon 100-400mm L IS zoom lens (handheld at 160mm) with EOS-1D Mark II. ISO 50. Evaluative Metering +1 1/3 stops: 1/10 sec. at f/25.

Situation #5: If you have white birds in a white sky with no light, just add 1 1/3 stops of light and go home happy...

Snow Geese, adult and immature preening, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +2: 1/200 sec. at f/16.

Situation #5: In this basically white-out situation—with white birds, soft light and pure white snow—I added two stops of light to keep the whites

Great Egret, pre-dawn flight, Venice Rookery, South Venice, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2 stops set manually: 1/40 sec. at f/4. Fill Flash at -1 stop w/BB.

Situation #5: With a white bird, a white sky, and no sun, I added 2 full stops of light to come up with the correct ambient exposure.

Samburu woman smiling, Samburu, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/160 sec. at f/4.

Situation #6: Here the scene averages to darker than a middle tone and subject is in the shade. I would have used the metered exposure as suggested, but to avoid burning the jewelry highlights I went with -1/3 stop which turned out to be the perfect choice.

Situations that average to darker than a middle tone are uncommon to rare in nature photography. And when you do find them, it is rarer still to find that there are no bright highlights in the scene. The huge majority of the histograms of natural history photographs feature data spread across the entire tonal range.

As we have seen on the preceding pages, learning to come up with a good exposure on a consistent basis is not rocket science. And with digital being so forgiving, it is not necessary to be as right-on as it was with color slide film. To sum up, when the sun is out, the meter is pretty darned smart. Remember to subtract light when there are light, bright, or white highlights. As you gain experience, you will begin to encounter some situations where the sun is out and you find that you can actually ***add*** 1/3 stop of light to move the histogram to the right without overexposing the highlights.

Overall dark situations are rare in nature photography.

When the sun is not out, you will find yourself learning to add light with the amount depending on how much lighter than a middle tone the scene averages. Without bright sun, we learned that the lighter the overall tonality of the scene, the more light we need to add. In short, in cloudy situations, the meter is not so smart. We need to add light to keep from underexposing in nearly all low-light situations.

Over the next few pages, we will take a look at two very challenging exposure situations.

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Sandhill Crane chick
Indian Lake Estates, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 200. Evaluative Metering -1/3 stop: 1/250 sec. at f/5.6.

When I first started digital, I often underexposed more than I needed to. Today, I would make this image at the metered exposure and then check the histogram to ensure that I had not burned the highlights.

Creating 11 a.m. Silhouettes

Many years ago at Merritt Island NWR in Titusville, Florida, I photographed a Boat-tailed Grackle sitting on a low perch with super-bright glaring highlights in the background. When I got my slides back I saw that they were well over-exposed. I continued to attempt to create images like the one on this page, and after awhile came up with a good system for getting an exposure that I could work with.

When I come across what I now call the “11 a.m. silhouette” situation, I begin by subtracting 2 stops of light if I can see the subject’s naked eye, or by subtracting 3 stops of light if the highlights are so bright that I can barely see the subject or if I cannot see it at all). To achieve maximum backlighting, you will of course need to position yourself so that the subject is directly between you and the sun. With flashing, glaring highlights it is often impossible to acquire focus automatically so it is best to focus manually. If you cannot see your subject to focus manually because the highlights are too bright, simply take a step to one side, focus, and then step back to your original position. Doing so may allow you to use One-Shot AF.

Often times the light levels are so high that I need to lower the ISO; at times I have to drop down all the way to ISO 50. On perfectly clear days, you may wind up working at 1/8000 sec. at f/22 or at f/32. I will generally dial in my exposure compensation, set f/22 in Av mode, make a single image, and check the histogram. In most cases, the histogram will show pegged (underexposed) shadow areas on the left side of the histogram and pegged (overexposed) highlights on the right side of the histogram because the range of tonal values in such scenes is much greater than even digital can handle. If there are more underexposed shadow areas than overexposed highlight areas and I can see the subject in the image in the LCD on the back of the camera, then I am happy with the exposure compensation that I set.

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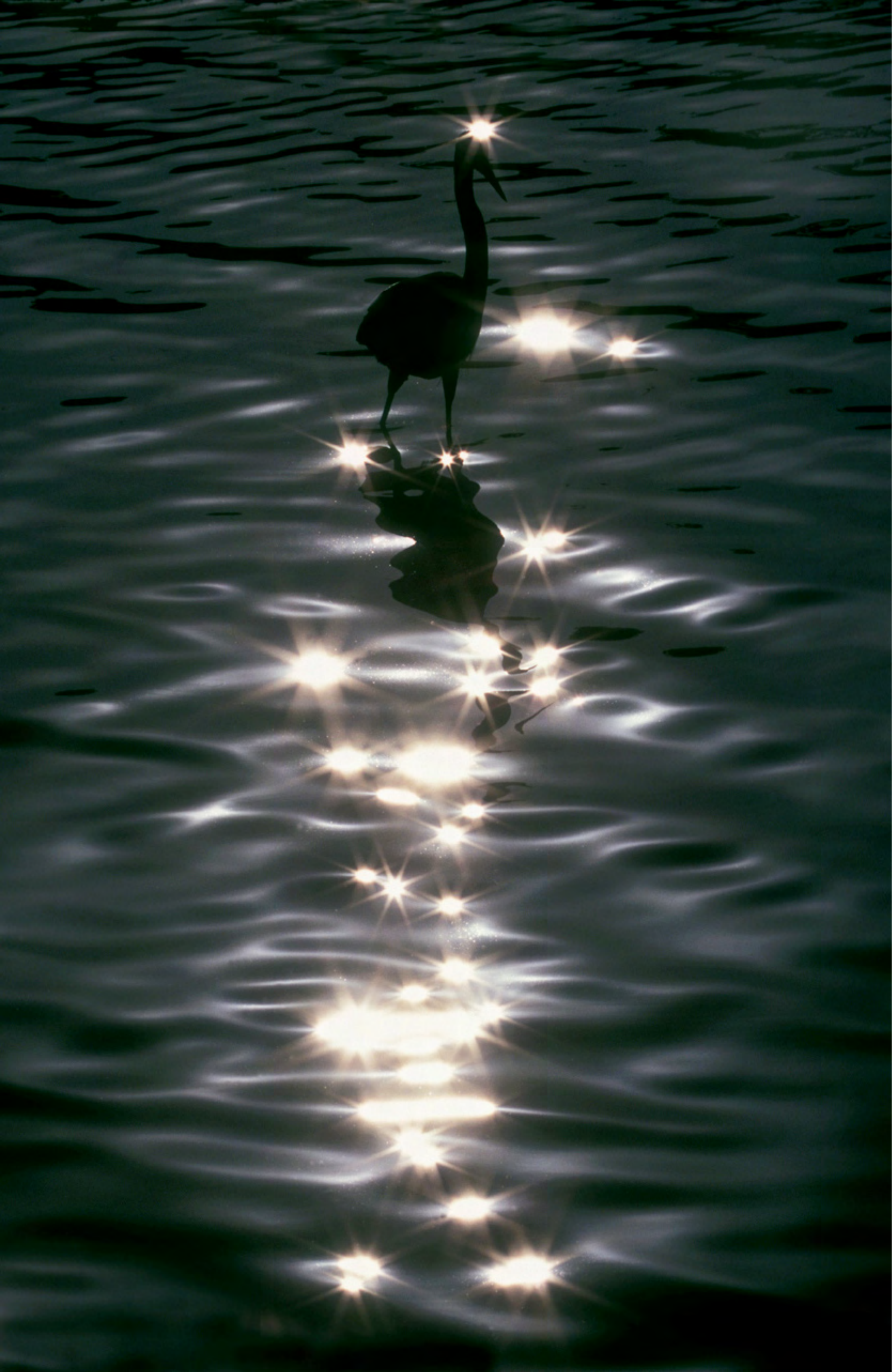
Great Egret, Blind Pass, Captiva, FL

Canon 100-400mm f/4L IS zoom lens (handheld at 232mm) with EOS-1D Mark II. ISO 400. Evaluative Metering -2 stops: 1/2500 sec. at f/22.

With study and practice you can learn to make pleasing and powerful images consistently when faced with super-bright glaring highlights.



If I cannot see the bird in the image on the LCD I will add some light to the exposure (-2 stops, perhaps, as opposed to -3 stops) even if this means that more pixels will be overexposed and detail-less. If there are more overexposed pixels than underexposed pixels, I will subtract even more light. Doing this can be tricky if you were already at -3 stops. You need first to have made an image at -3 stops and then checked the shooting data. You then need to set an exposure 4 or 5 stops darker ***by working in Manual Mode***. Here is an example: You make an image at -3 stops and the shooting data shows 1/2000 sec. at f/22. If you want to go 1 stop darker than that, set 1/4000 sec. at f/22 manually. If you want to go 2 stops darker, set 1/8000 sec. at f/22.

In many situations when light levels are high but not extreme, it is possible to create images that are more pleasing by working at larger apertures. You can get an idea of what your image might look like by using your camera's stop-down preview feature (if it offers one). With the Canon pro bodies, I use the ring finger of my right hand to depress and hold the stop-down preview button.

Making good or great images in these glaring highlight situations can be extremely difficult, but the results can be spectacular.

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Great Blue Heron with starbursts, Placida, FL

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1v. Provia F-100 pushed one stop to EI 200. Evaluative Metering -3 stops: 1/4000 sec. at f/22.

This is my very favorite glaring highlights silhouette. Some lenses will create the starburst effect seen here at apertures of f/22 or smaller.

Bird photographer, Fort DeSoto Park, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering -2 stops: 1/3200 sec. at f/32.

I have successfully marketed many of my images of nature photographers at work.

Photographing the Bright Sun

This is perhaps the most challenging exposure and silhouette situation. Images in this category are created on clear days with the sun up and fully clear of the horizon. The sky around the sun in these situations is an extremely bright white. It appears black in the photographs because we are underexposing as much as possible in an effort to keep from overexposing the sun's highlights. When photographing the bright sun on a clear day, care must be taken not to damage one's eyes. If you look away from the sun and the world looks at all purplish, it is best to cease and desist or risk serious and permanent eye damage. In addition, it is best to restrict such efforts to one half hour after sunrise and one half hour before sunset. If it is hazy or the sun is at all obscured by thin clouds or fog, you can figure your exposures normally.

I always work with either stacked teleconverters or with the 2X TC alone when photographing the bright sun. To begin, set the darkest possible exposure by choosing ISO 50, choose your camera's highest shutter speed (1/8000 sec. with the Canon pro bodies), and set the aperture at f/64. If you hope to capture an image featuring a bird flying across the face of the sun, you do of course need to find some birds flying consistent flight paths. This situation arises most mornings at Bosque. After you have set the exposure as described above, focus manually and approximately on the birds (not on the sun). The f/64 will yield sufficient depth-of-field to cover a wide range of flight paths.

Now you are ready to frame the sun. To do this, you must use the depth-of-field preview feature so that you will be seeing a drastically darkened sun. Once you have pressed the preview button, make sure to keep it depressed as you frame the image. If your finger slips off while the sun is in the frame you may damage your eye. Once you have put the sun where you want it in the frame, lock the tripod head just enough to keep the lens from shifting once you let it go. Now you are ready to try to make an image as the birds fly across the face of the sun. In no case should you look through the viewfinder when attempting to photograph the bright sun. If you do so while holding down the preview button, your retina will be hit by a bright flash of light when the shutter opens. Furthermore, by the time you see a bird in front of the sun, it will be too late to press the shutter button.

If you are using stacked teleconverters, try this technique: After you have tightened the tripod controls, place the closed fist of your left hand atop the lens barrel with your thumb extended and pointing towards the sky. Move your head so that the sun is hidden behind your thumb and when you see a bird flying into the center of your thumbnail, press the shutter button with your right index finger (as you usually would). When using the 2X TC alone, I shade the sun with my left hand and watch as birds approach the sun. As soon as the possibility of having a bird or a small group of birds fly in front of the sun, I make a long sequence of images by holding the shutter button down until the birds are past the sun. You will need to re-frame the sun every minute or so as the earth is spinning away from it at great speed. This is another very challenging situation but with study, careful technique, and a bit of luck, you can make some great stuff.

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Snow Goose against bright sun, Bosque Del Apache NWR, NM

Canon 500mm f/4L IS lens with stacked 1.4 and 2X II TCs and EOS-1D Mark II. ISO 50. Manual Mode: 1/8000 sec. at f/64.

I remember jumping for joy when I first saw this image on the camera's LCD. In retrospect, I wish that I had pressed the shutter a fraction of a second sooner so that the bird would have been positioned a bit farther back in the frame.

Sun and ominous clouds, Fort De Soto Park, FL

Canon 500mm f/4L IS lens with stacked 1.4 and 2X II TCs and EOS-1D Mark II. ISO 50. Manual Mode: 1/2500 sec. at f/64.

The sun looked blazingly bright, so I made an image at 1/8000 at f/64. When I saw that the histogram showed gross underexposure, I opened up to 1/3000 sec, and then finally to 1/2500 sec. That yielded a perfect histogram.

Snow Goose with wings up against bright sun, Bosque Del Apache NWR, NM

Canon 500mm f/4L IS lens with stacked 1.4 and 2X II TCs and EOS-1D Mark II. ISO 50. Manual Mode: 1/8000 sec. at f/64.

The sun was so bright here that I needed to convert the image 2 stops darker in order to avoid having any overexposed pixels.

Working in Manual Mode

Many professional and serious amateur photographers work in Manual Mode much or all of the time. For years I have preferred to work in Av mode and to enter exposure compensation as needed. This approach is usually faster and simpler whenever the background is of a relatively constant tonality. When the background tonality is changing from moment to moment while the light remains constant, it is best to work in Manual Mode. Here are some examples of rapidly changing backgrounds: a shorebird on a rock along the edge of the ocean with waves breaking behind it; an eagle flying against a blue sky interspersed with large white clouds; cranes taking flight and flying in front of a variety of backgrounds that might include water, yellowed grasses, mountains, or sky.

There are other reasons to work in Manual Mode, especially with digital capture. When the light is relatively constant you can check the histogram to verify your exposure and then set the correct exposure manually. From that point on, you are guaranteed perfect exposures frame after frame as long as the light does not change. Most folks do not realize that the size and location of unusually light or dark areas in the frame greatly affects all full screen metering patterns. If a Laughing Gull's black head is in the center of the frame, the meter will tend to overexpose. If its brilliant white breast is in the center of the image, the meter will tend to underexpose. By working in Manual Mode, you are assured of getting consistently good exposures without worrying that unduly light or dark images are playing havoc with your meter readings.

Whether I am working in Av mode or Manual Mode, I rely on Evaluative Metering. That would be Matrix if I were using Nikon. (Note: because birds are small, fast-moving critters, I have always relied on a full screen metering pattern; I never use spot-metering.)
As many folks are confused as to how to set their exposures when working in Manual Mode, I offer the following basic tutorial.

#1: When you work in Manual Mode you select and set the aperture and you select and set the shutter speed. With my Canon cameras the default setting has you changing the shutter speed with your index finger dial and the aperture with the thumb wheel. (With Nikon it is the opposite; you set the shutter speed with your thumb, the aperture with your index finger.)

#2: After selecting Manual Mode, point your camera at a scene or stationary subject and lock your tripod head so the framing remains constant. Next select and set the desired aperture. Then adjust the shutter speed until the indicator comes to rest at the center of the analog scale; when the indicator is on zero, it signifies the metered exposure.
If you change the shutter speed and do not see the indicator moving along the scale, check both ends of the scale. With most camera bodies, the indicator will be flashing to indicate that you are off the scale. Some camera bodies show +/- two stops, others show +/- three stops. If it is flashing at the over-exposure end of the scale, you need to set a faster shutter speed. If it is flashing at the under-exposure end of the scale, you need to set a slower shutter speed. (Note: if the indicator rests at the end of the scale but is not flashing, it indicates that you are exactly either two or three stops (depending on your camera) over or under.

At first, you will simply want to practice nulling the meter, that is, getting the small square to rest on the mark at the center of the scale. Again, this zero setting lets you know that you have set the metered exposure, the exposure suggested by the camera's metering system.

#3: When working in Manual Mode you do not actually set exposure compensation. To come up with the exposure that you wish, simply change the aperture or shutter speed as above until the small square indicates the amount of over- or under-exposure that you desire. For instance, if you wish to work at +1 1/3 stops, you need adjust either the shutter speed or the aperture until the small square rests on the symbol that is 1 1/3 stops towards the over-exposure end of the scale. Or say you wish to underexpose by 1/3 stop, you would need to adjust either the shutter speed or the aperture until the small square rests on the symbol that lies one notch on the underexposure side of the null or zero symbol.

With a bit of practice you will quickly become comfortable working in Manual Mode and will be confident doing so whenever the need arises.

Laughing Gull, Skyway Fishing Pier, St. Petersburg, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/800 sec. at f/11 set manually.

By setting the exposure manually here I did not have to worry about changing the exposure compensation as I got closer to the subject.

Bald Eagle beginning yawn, Homer, Alaska

both images this spread: Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 500. Manual Mode: 1/100 sec. at f/8.

The same bird photographed on the same morning on the same perch in the same light is featured in both images on this spread. I determined the exposure by opening up 2 stops off the white sky. Next, I set it the exposure manually. Once I did that, it did not matter if my background was white sky or distant red building. The light falling on the subject was a constant as was the correct exposure. Had I been working in Av mode I would have needed to add about +1 2/3 stops for the image on the facing page while I would have used the metered exposure for the image above. Why make things that difficult? Once you know the right exposure simply set it and be done with it.

Sandwich Tern in flight
Fort DeSoto Park
St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. 1/1600 sec. at f/8 in Manual Mode.

I must admit to working in Manual Mode more and more (even in changing light). The sun was playing hide and seek with the clouds on the day I made this image. After a few years of practice, you will find yourself able to open up a bit when the sun drops behind a cloud and stop down a bit when it is at full strength. And you will be doing all of that instinctively...

Sandwich Terns copulating
Fort DeSoto Park
St. Petersburg, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Manual Mode: 1/1600 sec. at f/8 in Manual Mode.

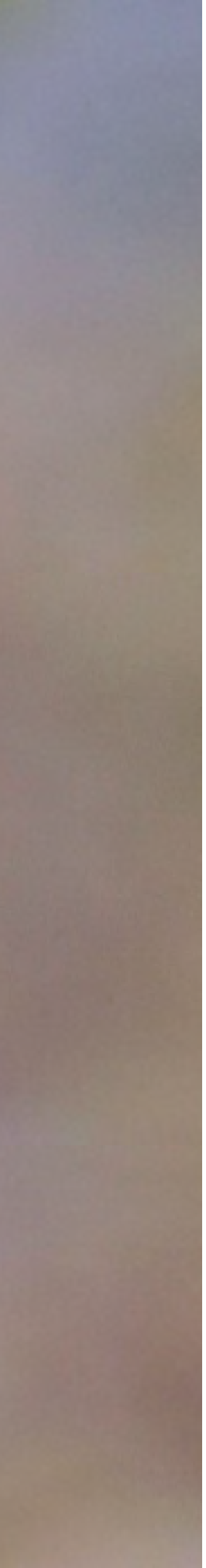
With the light constant, make a single image, check the histogram, and then set the exposure manually. You will be good to go. Note the rosy blush on the necks, breasts, and flanks of this pair at the height of breeding plumage.

both: Bald Eagle in flight, Homer, Alaska

facing page: Canon 70-200mm f/2.8L IS lens (handheld at 200mm) with EOS-1D Mark IIN. ISO 400. 1/1000 sec. at f/5 in Manual Mode.

above: Canon 300mm f/2.8L IS lens handheld with EOS-1D Mark IIN. ISO 400. 1/1600 sec. at f/7.1 in Manual Mode. Fill Flash with Better Beamer at -1 stop.

One of the huge advantages of working in Manual Mode is that the size of an unusually light or an unusually dark bird in the frame will not influence the meter because ***you*** *have set the exposure and it will not change unless* ***you change it****! If I had been working in Av mode while creating the image above, the eagle's large dark body would have caused gross overexposure.   For the image on the left, the proper compensation while working in Av mode (where you get real time exposure values) would have been about +1 1/3 or 1 2/3 stops.   For the image above, I would have needed to set -1/3 or -2/3 stop to come up with the correct exposure. Since nobody is quick enough to make such changes when an eagle is flying right at them, working in Manual Mode is the only feasible option in these types of situations.*



Telephoto Flash Simplified

A gorgeous adult Bald Eagle sat on a post just yards from my vehicle, its plumage glistening from the early morning rain. It was dark and cloudy and still drizzling and the gloom would not begin to brighten even a bit for at least another hour. Even with digital, there was no way to make a pleasing image in such a dark situation with conventional methods, but by utilizing the right telephoto flash technique, I was able to come up with a series of spiffy images that more than did justice to the handsome raptor.

Using flash with a big lens is a great way to add a catch-light to an eagle's eye, freeze the action, restore the proper color balance with film or the correct white balance with digital, illuminate the shaded side of a backlit subject, produce sharper images, open up shadow detail on sunny days, intentionally underexpose the background to add drama, or, as above, to make images in extreme low-light situations.

Though the use of fill-flash and flash-as-main-light were covered thoroughly in *The Art of Bird Photography: The Complete Guide to Professional Field Techniques*, many folks have—over the years—been unable to grasp these concepts, so I will attempt to simplify things a bit here. In addition, a third method of using flash—Manual Flash—will be covered.

The Setup

When using flash to photograph wildlife, it is not advisable to mount the flash directly on the camera body. In most cases having the light source so close to the axis of lens will result in a variety of problems with the creature's eye or eyes. These may include red-eye, steel-eye, and funky purple-glow with birds (the latter more with digital images), and eye-shine or green-eye with mammals. In most situations these problems can be reduced or eliminated by using a flash bracket to raise the flash well above the lens axis. You will need to purchase an off-shoe cord to connect the flash to the camera's hot shoe. (To learn about my favorite flash bracket, visit: http://www.birdsasart.com/accs.html and scroll down to the F-1 Telephoto Flash Bracket.)

When photographing birds and animals, we often need to make a series of images in rapid succession to capture sequences of interesting behavior, but if your flash is powered only with the batteries in the flash head, it is impossible to do so. The flash will fire once and then take at least several seconds to recharge. To get around this problem, use an external battery to power the flash. You will need to purchase the proper cable so that you can plug your external battery into the flash head. Note: You will still need batteries in the flash head to power the LCD display, but they will last for several weeks at least on average.

Yellow-rumped Warbler, Pt. Pelee National Park, Leamington, Ontario, Canada

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/250 sec. at f/16 in Program mode. Fill Flash at -1 2/3 stops with Better Beamer.

When working with Fill Flash, the goal is to produce a completely natural looking image; the use of flash should not be evident at all. I often use Program mode when working with Fill Flash in cloudy-bright (or brighter) conditions.

Green Jay, Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/250 sec. at f/11 in Program mode. Fill Flash with Better Beamer at -1 stop.

Here again the ambient exposure and the flash exposure are perfectly balanced and as a result, the image does not look as if it were flashed. I used a bit more fill here in an effort to open up detail in the black face mask and hood.

By adding 1/3 stop of light here I have ensured a correct ambient exposure. That is the first step in creating a pleasing Fill Flash image. Then the flash output is reduced, in this case one stop. The key to understanding Fill Flash is to realize that if the flash fails to fire, the image will still be properly exposed.

Long Lens Flash Setup

Here you see the flash mounted on the Wimberley F-1 Flash Bracket. I call the F-1 the "Arca-Swiss Flash Bracket" as it clamps onto all of the Wimberley lens plates (which are Arca-Swiss compatible). Mounting the flash above the lens reduces eye-shine and allows the flash to remain in place when the lens is rotated to vertical format. Note that the Off-Shoe Cord 2 is needed to connect the flash to the camera's hot shoe and that a second cord is needed to connect the external power source (in this case the old Quantum Turbo Z) to the flash. Note also that I configure the flash bracket so that the flash is off-set to the right of the lens. This gets it a bit farther away from the axis of the lens barrel (thus reducing eye shine even more). I do not offset the flash when hand-holding an intermediate telephoto lens as that greatly upsets the balance of the outfit. I attach my Quantum Turbo Z to the post of the flash bracket via the clip and then wrap the cord once around the bracket so that it stays out of the way. I leave the flash on the bracket with all the cords and the Better Beamer in place on the flash except when I am traveling by air. That allows me to be ready almost instantly: I am often making images while others are still assembling their flash setups...

Short-billed Dowitcher and Marbled Godwit, Fort DeSoto Park, FL

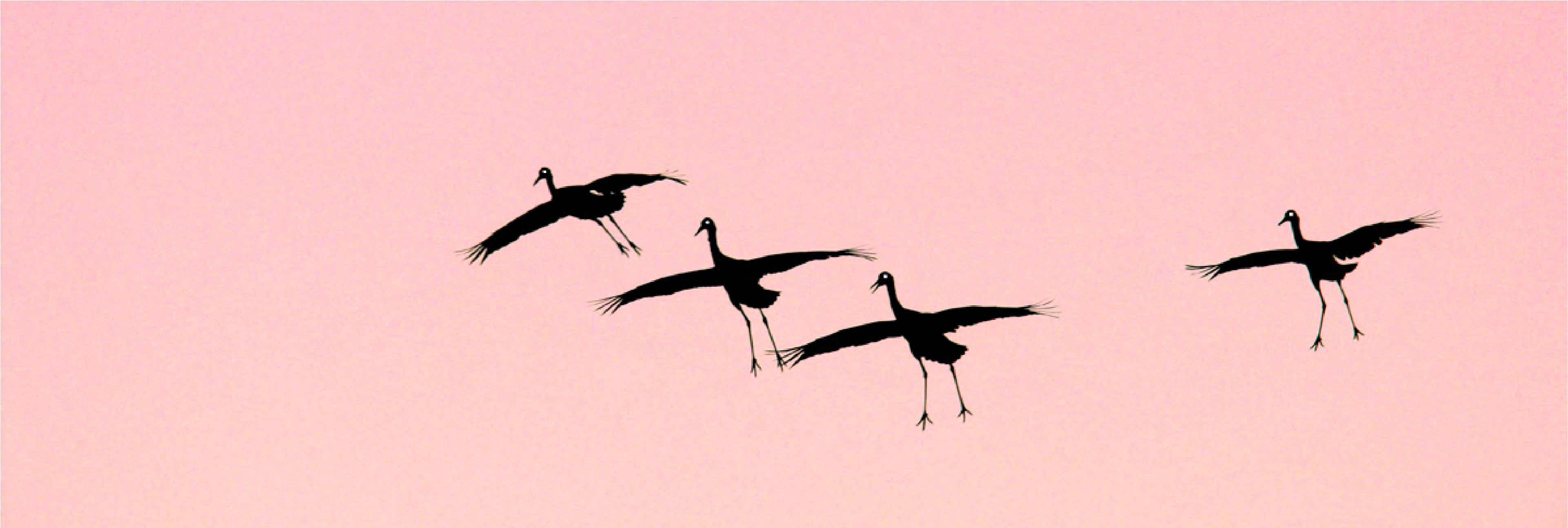
Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 100. Evaluative Metering at zero: 1/250 sec. at f/14 in Program Mode. Fill Flash at -1 stop with Better Beamer.

Here I used Fill Flash in bright sunny conditions to open up the shadow detail. Note that with the sun out, the metered exposure was fine.

The Better Beamer

Most flashes have a variable zoom feature but the long end is usually somewhere in the 85-105mm range. This is not much help when you are using lenses with focal lengths ranging from 300 to 800mms (or even greater effective focal lengths with teleconverters and digital multiplier effects). You are getting flash coverage of an area much greater than that of the lens and thus wasting light and battery power. The Better Beamer flash extender concentrates the flash and increases the flash output by 2 stops thus tripling the effective distance of the flash. There are currently four models available, each designed to fit a variety of popular model flashes.

When you are working in an automatic flash mode it is not necessary to make any adjustments when using a Better Beamer. The flash will turn off when the desired level of flash exposure is attained. The beamer saves battery power, allows for the use of smaller apertures (to gain additional depth of field), and vastly increases the effective range of the flash at a given ISO and aperture. (The effective distance of the flash is roughly tripled.) Best of all, it folds flat for easy transport and sets up in less than a minute. To learn more about the Better Beamer, visit: http://www.birdsasart.com/accs.html and scroll down.



Sandhill Cranes descending, Bosque Del Apache NWR, NM

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 1600. Evaluative Metering +1 stop set manually: 1/250 sec. at f/8. Flash at -1 stop with Better Beamer.

When used with a Better Beamer and high ISOs, flash can illuminate the eyes of birds at great distances.

Painted Bunting, Ramirez Ranch, Roma, TX

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/640 sec. at f/8. Fill Flash at -1 1/3 stops with Better Beamer.

I almost always use flash when photographing songbirds but with digital the advantages are not as great as they were with film.

Flash as Fill

To use flash as fill, set your flash to the automatic mode (usually TTL or ETTL) and set the ambient (available natural light) exposure ***as if you were not using flash.*** Then reduce the level of the flash. (See your flash manual to learn to adjust the flash exposure.) With film, experiment with flash settings between -1 and -2 stops. With digital, which is much more sensitive to flash, try reducing the flash 2 to 3 stops. The goal when using fill-flash is to produce natural looking images with just a splash of light from the flash. In low-light situations, using fill-flash will yield truer color by eliminating the blue cast to your images. In sunny conditions, fill-flash does a great job of opening up shadow detail.

I often work in Program mode when using flash as fill, but when working in low light conditions, I prefer switch to Av. In either case, I simply dial in the plus or minus exposure compensation for the ambient light as required and then reduce the flash exposure as above. To keep things simple, I always set the ambient exposure on the camera and the flash compensation on the flash. (Some systems allow you to set both the ambient and the flash exposures on the camera…) ***The key to understanding Fill Flash is to realize that if the flash fails to fire, the exposure will still be a good one.***

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Lesser Scaup, Drake, Coronado, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/250 sec. at f/7.1 in Manual Mode. Fill Flash at -1 stop with Better Beamer.

Fill Flash helped to bring out the true color of the head and to reveal detail in the black feathers of the breast.

Flash as Main Light

In situations where it is simply too dark to photograph, it is often necessary to use the flash to provide 100 percent of the light that illuminates the subject. While it is possible to use flash as main light in your camera's Program mode, I strongly recommend working in Manual Mode so that you can have control over the tonality of the background. Let's say that you have a tame Tricolored Heron early on a cloudy-black morning. You would like to make a head and shoulders portrait of the bird against the dark green water, so you add your 1.4X teleconverter and are dismayed to see that your shutter speed is only 1/25 sec. at the wide-open aperture of f/5.6. This is the perfect situation to use flash as main light because it is near-impossible to produce consistently sharp images at such a slow shutter speed.

Set your camera to Manual Mode and select 1/60 sec. as the shutter speed and f/5.6 as the aperture. This represents an underexposure of 1 1/3 stops and will be represented as such on the analog exposure scale in your camera's viewfinder. As the light from the flash falls off with the square of the distance, it is best to strive to keep the ambient exposure that you set manually within a stop or a stop and a half or so at most of the correct ambient exposure so that you avoid the dreaded black-background-obvious-flash-look. If the background is proximal to the subject it too will be lit by the flash and you do not have to concern yourself with the degree of ambient underexposure.

You now need to set the flash exposure so that the subject is properly exposed. With film, setting the flash at zero will generally yield good results. Theoretically, the same should be true when using flash with digital, but in low light situations such as those described above, flash levels ranging from -1/3 to – 1 full stop will properly illuminate the subject. I teach folks to check their digital exposures by looking at the ***histogram*** rather than at the ***LCD display***; but when using flash, viewing the image on the LCD can reveal whether or not you have over-flashed the subject. ***The key to understanding flash as main light is to realize that if the flash does not fire the image will be severely underexposed.***

Spectacled Pigeon on nest, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Manual Mode: 1/250 sec. at f/11. Flash as main light at -1/3 stop with Better Beamer.

With this pigeon nesting pretty much in the dark under the roof of the wooden rain shelter in front of the lodge, this was a classic flash-as-main-light situation. The ambient exposure setting (which was set arbitrarily) represented about an 8 stop underexposure; in this case, the flash provided all of the light for the exposure. If the flash had not fired, the image would have been black. Notice that the wall behind the pigeon, which was only two or three inches behind the bird's head, was barely illuminated by the flash. Some might find the faint shadow of the bird's bill and neck on the wall objectionable. (It would take two additional flashes to eliminate these shadows; one flash is more than enough for me...)

Tricolored Heron on dark, drizzly morning
Ding Darling NWR, Sanibel, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Manual Mode: 1/60 sec. at f/8. Flash as main light at -1/3 stop with Better Beamer.

When using flash-as-main-light with digital capture, it is rarely necessary to set the flash to zero to achieve a good histogram and a good exposure. The manual settings here represented a 3 stop underexposure from the suggested ambient exposure, which was 1/8 sec. at f/8. Making a sharp image at 1/8 sec. at a focal length of 1200 mm is impossible, so flash-as-main-light was the obvious choice here.

The image on the upper right is straight out of the box. In the image directly above, I selected the background, feathered the selection 3 pixels, and then used a Shadow Highlight Adjustment to lighten the background. In the image on the right, the flash failed to fire.

Manual Flash as Main Light

In some flash-as-main-light situations, learning to use Manual Flash can yield more consistent results than the technique described directly above, and for reasons unknown to me, the results when using Manual Flash often look more natural. With Canon equipment, you must work in Manual Mode when using Manual Flash. If you, for example, are in Av mode the shutter speed—for some absurd reason—defaults to 1/8000 sec. and your image will be black. I learned that lesson the hard way when I had a Barred Owl with a coot chick in its bill posing on a clean horizontal perch. Ouch!

I often turn to Manual Flash in low light situations when the subject is stationary and the subject-to-camera distance is constant. This situation may occur when you are working from your vehicle or when you are photographing a perched owl from a boardwalk. To begin, get your flash out of TTL or ETTL mode and set it to Manual Mode. You will see a flash setting such as 1:1 or 1:16. A setting of 1:1 tells you that the flash will output at full power. I often set 1:1 when I know that I will need all the flash that I can get. This often occurs with distant subjects, when using teleconverters, or when working with small apertures especially when you are reluctant to increase the ISO. A setting of 1:16 would mean that the flash output is only 1/16 of the maximum output.

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Bald Eagle, Homer, Alaska

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Manual Mode: 1/250 sec. at f/5.6. Flash-as-main-light with Manual Flash at approximately 1:4 with Better Beamer.

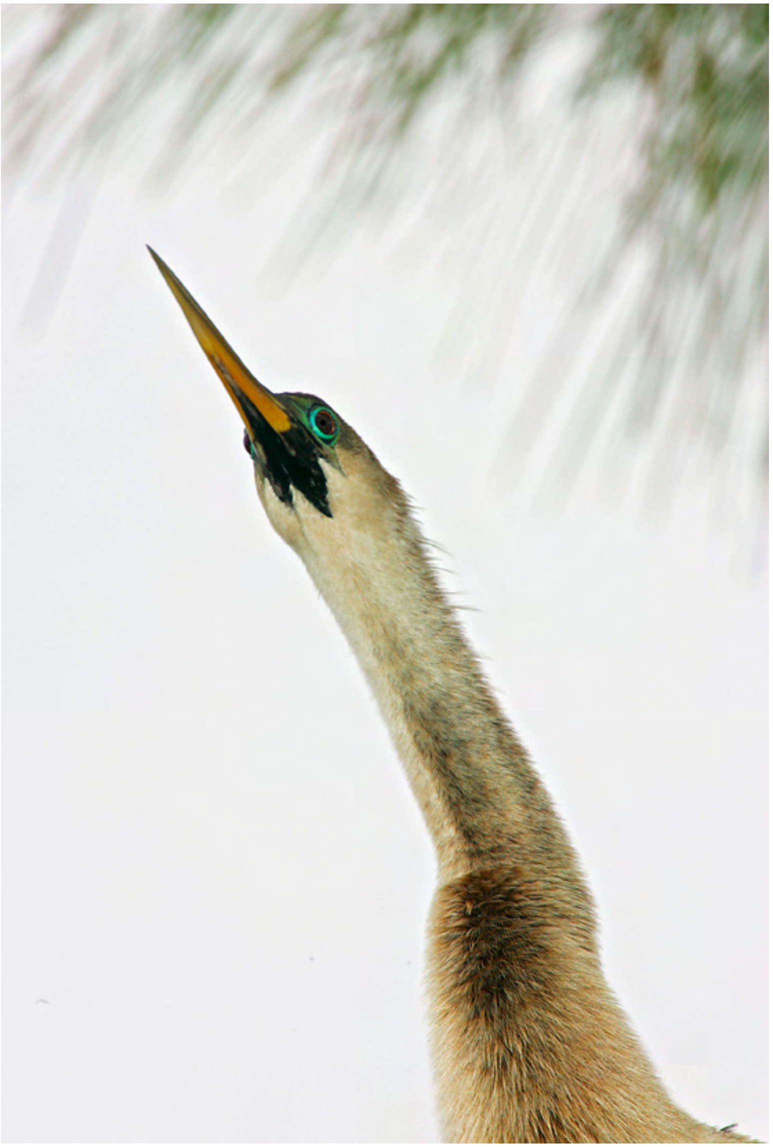
*Once you determine the right Manual Flash setting at a given distance, every exposure will be perfect. As it was totally dreary and overcast when this image was made, the distant sky background was rendered **dark** blue because 1/250 sec. at f/5.6 represented a significant ambient underexposure.*

Your next consideration is how to set your ambient exposure. Remember, you need to be in Manual exposure mode. For the most natural look, set your ambient exposure as if you were not using flash. Doing this will result in natural looking backgrounds. The other option is to underexpose the background a bit. If you stay within 1 to 1 1/2 stops of the correct ambient exposure, this will make the background appear just a bit dark.

Many folks (including Greg Downing who opened my eyes to using Manual Flash) like to figure the Manual Flash setting by using the distance scale on the flash. When using a Better Beamer as I usually do in dark telephoto flash situations, you must factor in the increased range of the flash if you are going to use the distance scale to determine your Manual Flash setting. I get confused when attempting to do that so I have come up with a simpler way. I guess-timate the Manual Flash setting, look at the image on the LCD screen, check the histogram, and then adjust the Manual Flash setting as needed. I find that this method is much faster for me.

With the 580 flash, you can fine-tune your exposures beyond the 1:1, 1:2, 1:4 (and so on) settings that were available on earlier flashes. If you try 1:4, for example, and the image looks just a bit hot, you can reduce the Manual Flash setting to 1:4 -1/3 stop. Or if it looks a bit dark at 1:8, you can set 1:8 +1/3 stop. If your first setting is way over or way under, you will of course have to make a more significant change. For example, if you make your first image at 1:1 and the image is totally over-exposed with flashing highlights on the subject, you might try dropping down to 1:8. Alternatively, you could choose a smaller aperture or lower the ISO. The more you use Manual Flash, the better you will become at making a good first choice. The beauty of using Manual Flash is that once you come up with a good exposure, every image from then on will be perfect as long as you give the flash a few seconds to reach full power.

By learning to use flash properly with telephoto lenses you can produce crisp, elegantly lit images on a consistent basis regardless of light levels.



Anhinga, female, Venice Rookery, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Manual Mode: 1/250 sec. at f/16. Flash-as-main-light with Manual Flash at approximately 1:2 with Better Beamer.

Using Manual Flash with perched birds at close range against white skies can produce excellent results.

all:
Great Blue Heron, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Manual Mode: 1/250 sec. at various apertures. Flash-as-main-light with Manual Flash with Better Beamer.

This bird was sitting peacefully on a picnic table along the edge of the lagoon at North Beach, pretty much in the dark. It was a perfect situation for using Manual Flash (as main light). The image on the left was the first I made. I had arbitrarily chosen 1:1 (full power) as the Manual Flash setting. When I viewed the image on the LCD it was easy to see that it was overexposed by several stops. I could have opted to try 1:4 or 1:8 in order to get a proper exposure but with the bird facing me I decided to go for lots of extra depth-of-field and changed the aperture from f/8 to f/20.

Note that in the image to the immediate right the background was rendered nearly black because the ambient exposure was many stops darker than what it should have been for a "proper" exposure. The flash provided all of the light that illuminated the bird. Light from the flash, however, falls off with the square of the distance so there was no way that the flash could light the background which was about thirty feet behind the bird.

In the image far right I simply opened up (lightened) the background with a Shadow/Highlight Adjustment. The strange thing is that I prefer the image with the darker background to the one with the lighter background.

left:
Wood Stork
Venice Rookery
South Venice, FL

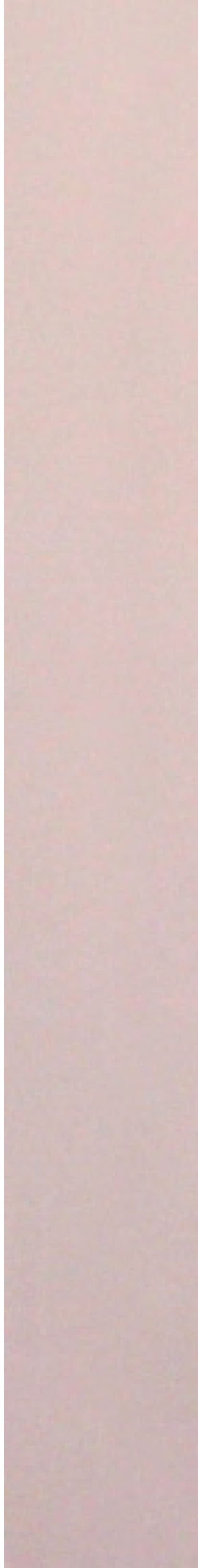
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 500. Evaluative Metering +1 2/3 stops: 1/250 sec. at f/16 set manually. Manual Flash as fill at 1:1 with Better Beamer.

When photographing Wood Storks on white-sky days I do everything in my power to keep the whites truly white. Here I maximized flash output and added lots of light to the metered exposure.

right:
White Pelican
pink sky flight at dusk
Gasparilla Bay, Placida, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 3200. Evaluative Metering +1 stop: 1/160 sec. at f/5.6. Manual Flash as fill at 1:4 with Better Beamer.

With large birds flying by on roughly the same flight path in very low light at dusk, I experimented with Manual Flash as fill and settled on a flash ratio of 1:4 (i.e., 1/4 power). Flash flight in extreme low-light conditions is much like entering the lottery: lots of throw-aways along with an occasional winner!



Rothschild's Giraffe with Common Zebras, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 200. Evaluative Metering at zero: 1/2500 sec. at f/4.

As the giraffe was walking, I manually selected a sensor on the left side of the viewfinder so that I could place the subject well back in the frame.

Autofocus Tips

The first autofocus camera bodies featured just a single sensor in the middle of the viewing screen, but newer models have offered a variety of layouts incorporating three, five, seven, nine, eleven, and as many as forty-five sensors. In most cases, you can elect to activate a single AF sensor from the array, to activate a group of sensors, or to activate all of the sensors in the array. This latter option is usually—but not always—best for photographing erratic action. Canon's EOS Elan 7 (film) and the EOS 10D (digital) offer seven-sensor arrays, while the EOS-1v (film) and the Canon Pro Digital Bodies all offer the 45-point array that was first introduced with the EOS 3. Most of the high-end Nikon bodies feature a five-sensor cross pattern, but the D2X features 11 focusing areas. (I have always felt that for nature photography a five-sensor array should be X-shaped rather than cross-shaped as this would have helped photographers keep small-in-the-frame subjects out of the center of the frame.

With most AF systems, the central sensor is the most responsive and the most accurate, but choosing and using it at all times often results in the photographer being somewhat of a compositional slave to the technology. By knowing all of the AF options available on your camera as well as their pluses and their minuses, you will greatly improve your chances of making sharp, well-composed images on a consistent basis.

If your avian subject occupies roughly half the frame and you are working in horizontal format, activating the central sensor and placing it on the bird's head, face, or neck will usually result in a pleasing composition with the bird's tail fairly close to the frame edge while leaving lots of room in front of it. With larger-in-the-frame subjects, it is usually best to avoid placing the central sensor on the bird's folded wing (especially when working wide open as I usually do). Doing so will render the feathers of the folded wing sharp, while the eye, which is well beyond the plane of the folded near-wing, will be noticeably soft (i.e., out of focus). If the bird is standing still, switch from AI Servo AF to One-Shot AF (with Canon, or from "C" to "S" with Nikon). Now you will be able to focus on the eye, recompose, and make a sharp image.

If you feel that the bird might become active or take flight at any moment, it is best to stay in AI Servo or "C" AF mode so that you are ready for action. A trick that often works well here is to place the central sensor on the bird's upper back, roughly on the same plane as the bird's eye, as this will render the eye in sharp focus. If there is enough light to give you a reasonably fast speed (of say 1/60 second or faster), still another option would be to place the central sensor on the bird's folded wing (as previously advised against) while stopping down to f/11 or f/16. This may yield enough depth-of-field to ensure a sharp eye. For small-in-the-frame subjects, selecting an off center sensor often works well.

With all high-end Canon bodies, you are able to activate all the sensors at once. (See the camera body manual for your specific camera to learn to do this.) When you do so, Canon calls it AFPS, for automatic focusing point selection. You activate all the sensors and the camera will select the best one for a given situation. Sometimes this works (and superbly, at that), and sometimes it doesn't. From the very moment that I first had my hands on an EOS 3, I had reservations about the 45-point system, and in particular, with AFPS. I remember pointing the lens at a crow flying against a blue sky on a sunny day with all 45 points activated and finding that with the black bird in the very center of the viewfinder the AF system, at times, could simply not see the subject… This never happens with the seven-sensor bodies.

Do know (see the next section), that as above, there are certain situations where AFPS performs superbly. It is great for making vertical images of tall birds (especially those that are walking parallel to the film plane), and for making vertical or horizontal head, head and neck, or head, neck, and shoulders portraits of most long-necked wading birds. In these situations, AFPS allows you—after acquiring focus—to place the subject just about anywhere in the frame while maintaining accurate focus. If, however, you try to use AFPS on a swimming duck, the system usually attempts to focus on the closest thing that it sees, the water ***in front of the duck.*** You will not, of course, be happy with those results.

Wood Duck drake charging aggressively, Santee Lakes Park, CA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering at zero set manually: 1/400 sec. at f/5.6.

When photographing ducks I often choose to activate the two sensors just below the central sensor and place them on the bird's neck. Note that I have used a panoramic crop here.

What I love to do for swimming ducks is to activate the two sensors just below the central sensor in the 45-point grid and try to place them on the duck's neck. This arrangement acquires and holds focus quite well and places the duck a bit down in the frame. I also find that using those same two sensors for flight photography can work well. At present, I have a love/hate relationship with the 45-point AFPS system. As age slows my reflexes, I find it more difficult to keep the central sensor on a flying bird, so I find myself relying more and more on AFPS for flight photography. AFPS/AI Servo AF acquires focus readily with birds flying against the sky, but is pretty much worthless if there is a background of trees or water, though on occasion, it may acquire and hold focus in those situations.

Nikon users can activate any one of the five sensors or choose dynamic AF where they activate all five. In my very limited experience with the Nikon system and with info from reliable friends who use Nikon, it is my strong impression that with birds in flight, especially with those flying directly at the camera, the Nikon AF system may yield sharper images across the board than the Canon AF system. The huge problem with the Nikon AF system is that it has an extremely difficult time finding the subject in low contrast and low light situations. In these instances—encountered all day long in most bird and general nature applications—the Canon AF system simply outperforms the Nikon AF system.

Whichever system you use, there are some things that you can do to optimize AF performance. For flight photography, or when working distant subjects, it is best to choose the far limit range setting. In addition, pre-focusing at the approximate distance you expect the subjects to appear helps the AF system to acquire focus quickly as the system can at least "see" the fairly well-defined subject. This pre-focusing can—in all cases—be done using AF. An example would be auto-focusing on the water below a group of feeding terns or gulls, or on the row of corn below a Snow Goose flight pattern. With some lenses and with some systems (Canon for sure), you can pre-focus manually.

Roseate Spoonbill, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/11.

I used One-Shot AF here and focused on the bird's eye; I was lucky to come up with a sharp image. It is always best to press the shutter button when unexpected action occurs; if the image does not succeed, you can delete it.

Sanderling, foraging juvenile, Sanibel, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering: 1/640 sec. at f/11.

When using the 2X TC with a big lens a good strategy when photographing moving birds is to place the central sensor on the bird's upper back just behind the head as I did here. (When trying to imagine just where I placed the sensor, don't forget that this image has been cropped.)

Sandhill Crane in flight
Bosque Del Apache NWR, NM

Nikkor 600mm f/4 AF-S lens with Nikon D2X. ISO 200. Matrix Metering -2/3 stop: 1/5000 sec. at f/4.

In the right hands, the latest-greatest Canon and Nikon digital bodies can produce amazingly sharp images.

To ensure a clean background, Todd made this image after waiting for all the cranes but this one to leave Harry's Crane Pool.

right: image copyright Todd Gustafson.

Thompson's Gazelle chase, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1250 sec. at f/4.

Whether I am walking down a beach or riding atop a safari van, I always set 45-Point AFPS when I am on the prowl as it offers the very best chance of capturing action. Without 45-Point AF I simply could not have created this image.

Canon's 45-point Autofocus (AFPS) System (and more…)

Canon's professional camera bodies (the EOS 3, 1V, 1D, 1Ds, 1D Mark II, 1Ds Mark II, and EOS-1D Mark II N) feature a 45-point Autofocus System. The 45 sensors are arrayed in a roughly elliptical pattern that is, of course, centered in the frame. You can activate all 45 points by first pressing the focus-grid button on the upper back-right of the camera with your right thumb and then turning either the index-finger dial or the thumb-dial until all of the sensors on the outer edge of the ellipse become illuminated in red. Even though only the outer sensors are lit up in red (that's why I call it "ring of fire") it is important to understand that ***all*** of the sensors are activated when using AFPS. When all 45 points are activated you are in Automatic Focusing Point Selection (AFPS) mode; the camera automatically activates the sensor or sensors that it deems to be best in a given situation. When using AFPS in AI Servo mode (for moving subjects) the active sensors will ***not*** be illuminated while focusing as they are when using AFPS in One-Shot Mode (for static subjects).

I almost always set AFPS in conjunction with AI Servo AF when walking down a beach (as I do so often) as this combination usually does quite well with flight and action. I also use the same AF setup when making tight horizontal head-shots of herons, egrets, or cranes as it enables you to place the bird's eye above the horizontal centerline. AFPS/AI Servo AF also performs well when creating vertical images of these same birds (regardless of how tightly they are framed). On the other hand, using AFPS on a swimming duck is often a total waste of time. You simply have to know your equipment. Once AF is acquired, you can easily move the subject around in the frame to create a pleasing composition without losing focus. If you do lose AF in this or any other situation, it is best to release the shutter-button and then depress it again to re-acquire focus.

When using AFPS it is relatively easy to attain focus on flying birds and child's play to maintain focus. With the EOS-1D Mark II, AFPS does pretty well with subjects flying against a clear sky, and the results are sometimes exceedingly sharp. Autofocus tracking accuracy, however, is not as consistently precise as it is when using the central sensor only (CSO), and therein lies the rub: Which do you want, the more accurate focusing offered by CSO or the ability of AFPS to acquire and maintain focus? I often find myself switching back and forth between the two when faced with consistently good flight photography opportunities. I must confess, though, as I get older each day, I rely more and more on AFPS. Keeping the shutter depressed once a flying bird enters the optimal zone can produce some really sharp images.

My love/hate relationship with AFPS continues to be so even with the Mark II series bodies. With the three newer cameras, however, the love predominates. In the short time that I have been using AFPS with my three Mark II series bodies, it has helped me capture some truly amazing images that I simply could not have created with other cameras. Its ability to grab a moving subject and focus-track accurately (even when working against backgrounds other than sky) often borders on the astounding. On my last trip to Nome, AFPS helped me make some wonderful images of a Black-bellied Plover flying about on the tundra and another of a hen Northern Shoveler blasting off from a roadside pond (thanks to Matt Haggadorn!) When AFPS is good it can be really, really good. Thus the love…
On the same trip, we had a moose standing on the tundra a ways off from the car. It was a dingy day and a bit foggy. I reached for the

Tricolored Heron striding Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/1000 sec. at f/4.

Whenever a bird presents itself roughly parallel to the imaging sensor, 45-Point AFPS will usually do a superb job of acquiring and maintaining focus.

45-Point is available when using a 1.4X TC with an f/4 lens, but not when using a 2X TC with an f/4 lens I added 2/3 stop of light here because of the soft, hazy sunlight.

400mm f/5.6 that had a Mark II on it set up with AFPS. I focused easily on the moose but just as I depressed the shutter button the system lost focus. The moose scurried (if a moose can scurry...) off and I bemoaned my fate. CSO would have held focus easily. AFPS had a problem with the low contrast. Thus the hate... In short, AFPS may have difficulty acquiring and maintaining focus in low light/low contrast situations (true even with static subjects like the moose). I strongly recommend that users switch to One-Shot AF mode and utilize the CSO only when photographing in these conditions.

The EOS 3 film camera was the first to feature the 45-point AF pattern and from the moment that I first held one I felt that the 45-point AFPS system was not—to coin a phrase—as ***central sensor-dominant*** as it should have been. Even with the Mark II (amazing as it is) I believe this to be true. At times, even when working in bright light with high contrast situations, AFPS fails to "see" a large-in-the-frame subject and fails to acquire focus even when the bird is in the center of the frame. (This pretty much ***never*** happens when using the central sensor only. Do note that the central sensor is more effective than any of the other 44 focusing sensors.) If you have a problem focusing on a fairly large subject in the center of the frame, try re-framing so as to move the subject out of the center of the frame. This often saves the day. When using the EOS-1n with all five of its focusing sensors active, users were advised to begin AF with the central sensor. That worked well ***because*** the 1n's AF system was ***central-sensor dominant.*** I do hope that it is possible to tweak 45 point AF system in the next generation of Canon cameras so that it works in a similar fashion (and have repeatedly urged the folks at Canon to do so).

When you are not using AFPS, you will need to manually select one (or two) of the 45 sensors. To do this, press the focus-grid button. You can move the active sensor from side to side by rotating the index-finger dial, or up and down with the thumb-dial. To select two side-by side sensors, first select the single sensor immediately above or below the two that you want to activate and then rotate the thumb-dial. If you rotate it ***clockwise***, you will light up the two sensors ***below*** the one that was previously selected. If you rotate it ***counter-clockwise***, you will light up the two sensors ***above*** the one that was previously selected. I love to use the two sensors immediately below the central sensor to photograph swimming ducks so that I can place them a bit down in the frame. Do realize that when I activate a sensor other than the central sensor, I am virtually always working with AI Servo AF. When I am working in One-Shot I work with the central sensor about 90 percent of the time, and with AFPS the other 10 percent. Activating and using only the central sensor when photographing birds in flight will almost always yield the sharpest images and AF tracking accuracy with subjects flying towards the camera will be maximized. The downside of using the central sensor only is that it is often difficult for some folks

Great Egret, bright breeding plumage with reptilian-like green lores, Indian Lake Estates, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 200. Evaluative Metering at zero: 1/2000 sec. at f/5.6.

Unless a bird is standing stock-still (when I would use central sensor/One-Shot AF and recompose), I will usually use 45-Point AFPS for creating head portraits. Using the central sensor and placing it on a bird's eye usually results in too much dead space above the bird's head. This looks like a -1/3 stop exposure but with the soft, early morning light, a check of the histogram showed that zero was fine with no loss of highlight detail.

(including me) to keep the sensor on the subject at all times, especially if the bird is flying quickly (as they usually do) or erratically. When doing flight photography, it is ideal to place the central sensor on the bird's head, face, neck, or eye(s). If the sensor falls off of the subject and detects distant trees or fields or mountains as background, it will, in most cases, lose focus on the subject: it will do exactly what it is supposed to do—focus on whatever is detected by the active AF Sensor. I once mentioned during a full-day seminar that lots of practice would improve one's flight photography and that fine motor control was a key factor in keeping the central sensor on the subject. Someone asked, "Does Canon sell Fine Motor Control?"

With sky-only backgrounds, the AF system will almost always stay locked on the subject even if the active sensor falls off of the subject. Many of my sharpest flight images were made with the central sensor only in cases where the central sensor was ***not*** on the subject. (BreezeBrowser's "Show Focus Points" feature often confirms that the central sensor was not on the bird at the instant of exposure! On a related note, you may—if you are using a Canon Pro Body—wish to experiment with Custom Function 17-1, which activates the sensors immediately ***surrounding*** the active sensor (or sensors). If you have done so, remember that BreezeBrowser will show only the selected sensor, not the surrounding sensors (that were activated by CF 17-1). Setting and using CF-17-1 will often improve AF performance. If the background is uniform and of low contrast, it is sometimes possible to hold focus on the subject using AI Servo AF *even when the sensor* ***does not fall on the subject.*** This can be a huge advantage when you are using a 2X TC with an f/4 lens. With smaller-in-the-frame subjects, it is sometimes possible to focus on the

Great Blue Heron, predawn, Fort DeSoto Park, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 640. Evaluative Metering +1 2/3 stops: 1/125 sec. at f/4.

If I had used the central sensor here instead of 45-Point AFPS the bird's bill would have been up against the left frame-edge..

Waved Albatross in flight, top-shot, Hood Island, Galapagos, Ecuador

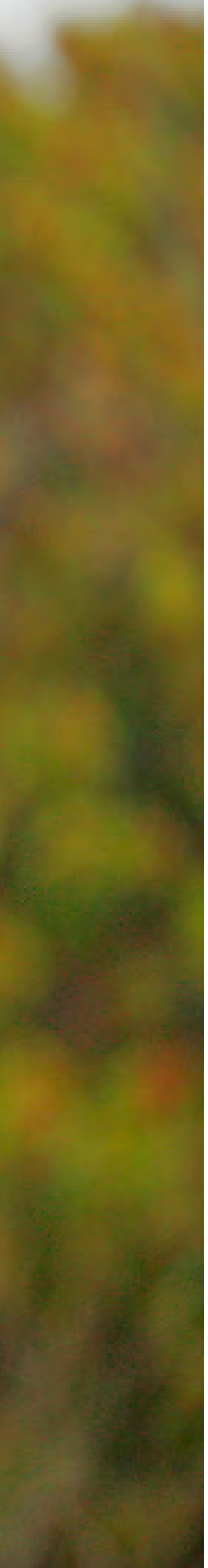
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 640. Evaluative Metering + 1 2/3 stops set manually: 1/1000 sec. at f/5.6.

When a flying bird is banking (as above) or when it has its wings up, 45-Point AFPS will almost always yield a sharp image.

subject and then recompose so that the subject is ***well off-center.*** If the background is of low contrast, AF will often continue to hold even though the sensor is off the subject and you are in AI Servo AF mode! I discovered and used this technique recently while lying in the sand on my belly on Sanibel photographing shorebirds. I was trying to come up with a way to make a pleasing composition without having to reach up and toggle from AI Servo to One-Shot AF. And I did!

When using a Canon pro body, it is—in virtually all cases—best to use AI Servo AF for moving subjects because (when it works as it is supposed to) it not only tracks the subject but predicts where it will be at the exact instant that the shutter opens. The decision to use One-Shot AF or AI Servo AF when photographing perched or otherwise static birds can be a difficult one. (The AI by the way stands for "Artificial Intelligence.") When using One-Shot AF it is best to focus on the bird's eye and then recompose. If the bird moves its head at all, there is a danger that the eye may not be sharp. If you choose AI Servo AF, it is best to manually select the AF point (or points) that will yield a pleasing composition when the sensor is placed on the bird's head, face, neck, or eye. The danger in this approach is that if the bird changes its posture or position significantly you may be left out in the cold. Another option that works well when photographing small or medium-sized birds at close range (especially against clean backgrounds) is to use the central sensor, choose a small aperture in the f/11 to f/16 range, focus on the near-wing (or better yet the back) and then rely on having enough depth-of-field to produce a sharp eye. (I do not like using 45-Point AFPS for small birds at close range because it will always focus on the near-shoulder.)

Note: The Élan 7 series bodies and the EOS 10D (digital) camera body feature a seven-point AF array, and the EOS 20 D features a nine-point AF pattern. With all of these bodies the speed of initial focus acquisition is adequate-or-better (it is best with the 20D), but not as fast as with the pro bodies. With each of these camera bodies, however, AF tracking accuracy is excellent, especially with birds flying directly at the camera. AF accuracy in these situations sometimes surpasses AF accuracy in all of the above-noted bodies except possibly for the Mark II series bodies. Whenever the wind and light are from approximately the same direction, I like to carry an intermediate telephoto lens with me into the field so that I can be ready for handheld flight and action opportunities. I mount one of three lenses (the 400mm f/5.6, the 100-400mm L IS zoom lens, or the 70-200 IS L zoom lens—the latter if the birds are really close) and sling the rig over my shoulder via the camera body strap. When I owned a 20D, I often used it with my flight-photography rig. My shoulder greatly appreciated its lighter weight as compared to the Pro Bodies.



left:
Great Blue Herons, “Glad to see you, honey...”
Venice Rookery, South Venice, FL

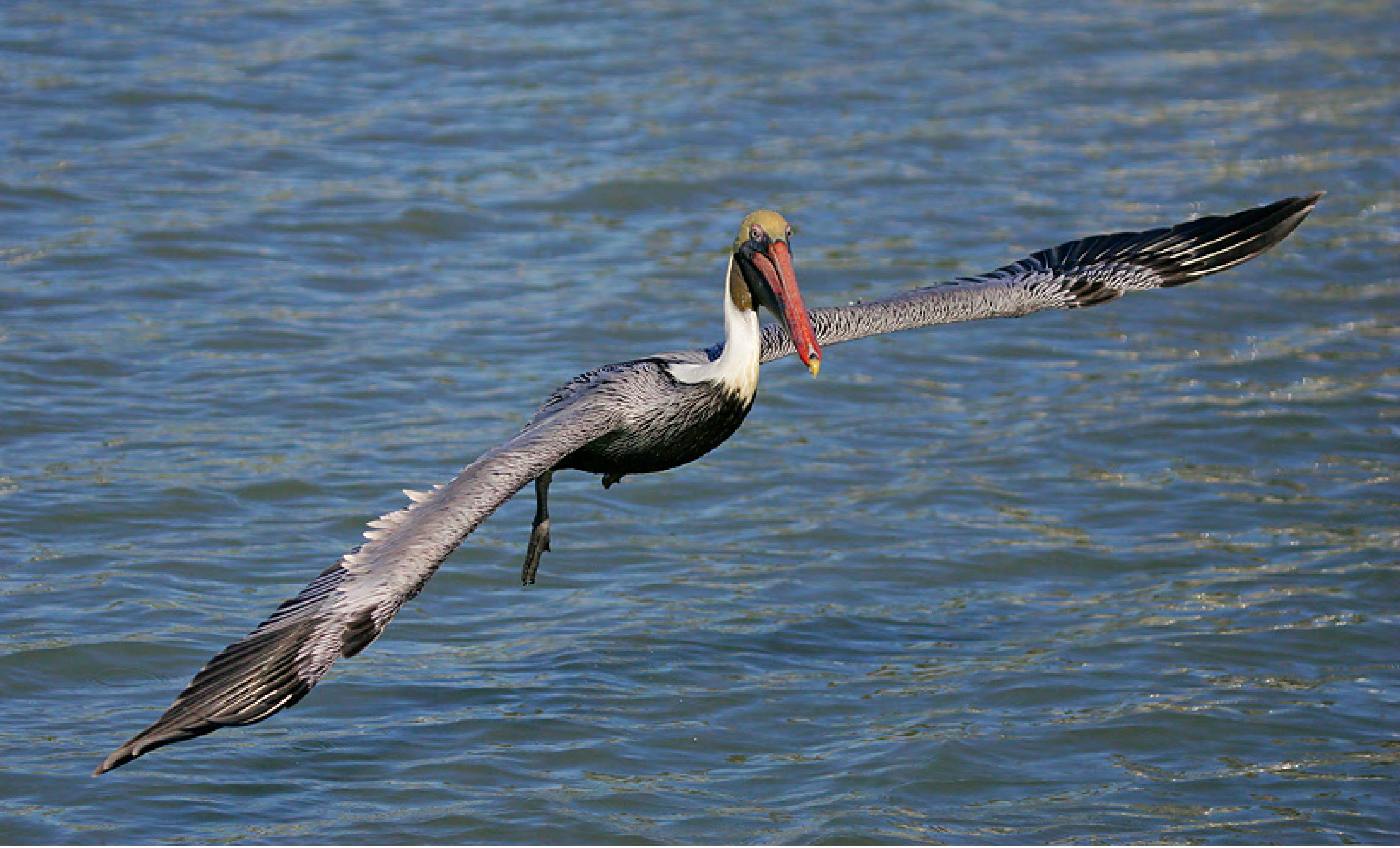
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 500. Evaluative Metering +1 2/3 stops off the sky set manually: 1/640 sec. at f/4.

It would have been impossible to make this image with only the central sensor activated. 45-Point AFPS allowed me to place the bird in flight well back in the frame.

above:
White-backed Vulture
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II C and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stops set manually: 1/1000 sec. at f/8.

With the Mark II series bodies, AF accuracy with 45-Point AFPS has been improved, especially with birds flying right at you. Working at f/8 in these situations, whenever possible, is a big help.



Brown Pelican, turning in flight, Placida, FL

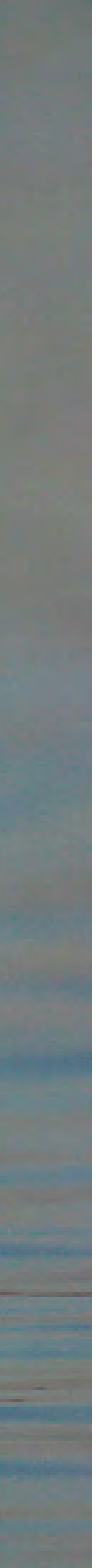
Canon 100-400mm L IS lens (handheld at 170mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/4000 sec. at f/5.

When using 45-Point AFPS on an intermediate telephoto lens, focusing seems to be more accurate at the short end of the focal-length range, especially with birds flying towards you. For a Florida Brown Pelican, this bird had a very red bill.

Brown Pelican, getting ready to land, LaJolla, CA

Canon 100-400mm L IS lens (handheld at 200 mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/4000 sec. at f/5.6.

Here I had activated only the central sensor but at the moment of exposure it was ***not*** *on the bird. Setting CF-17-1 or 2 often helps AF to hold focus even if the sensor falls momentarily off of the subject. This is especially true when working against clean backgrounds.*



left:
Snowy Egret landing
Little Estero Lagoon
Fort Myers Beach, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 500. Evaluative Metering +1/3 stop: 1/320 sec. at f/5.6.

45-Point AFPS often has trouble in low contrast situations, but here it performed perfectly and yielded a very sharp image. The soft early morning light and the gorgeous, clean, powder-blue background make this image a favorite of mine.

above: Great Blue Heron landing with twig, Venice Rookery, South Venice, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 500. Exposure set manually via histogram check: 1/500 sec. at f/4. Fill Flash with Better Beamer at -2 stops.

45-Point AFPS performs superbly whenever the subject presents itself as relatively flat.

Chapter VII It Ain't Just Birds…

Being out in the natural world more than two hundred days per year photographing birds for the past twelve years, it is only natural that I wound up making some scenic images, and that I wound up photographing all manner of plants, trees, flowers, bugs, butterflies, and a few mammals as well. And in recent years, I have fallen in love with Africa—Kenya and Tanzania to be more specific. I do of course photograph birds on the Dark Continent every chance that I get, but I also enjoy photographing elephants and lions and giraffes and zebras and all manner of antelopes. I learned quickly that photographing from the top of a safari vehicle is extremely challenging. And most recently I have spent quite some time photographing Coastal Brown Bears in Alaska. I have sold only a few of my non-bird images from my office-home, but several stock agencies have done fairly well with a variety of my non-avian images. I take great pleasure, though, in putting up an image of a flower or a hippo or a sow with a spring cub and hearing the audience ooh and aah just as they do when they view my favorite images of birds.

The principles that go into creating successful natural history images are the very same principles that go into creating successful images of free and wild birds. Early in my career, when I began photographing people birding and folks photographing nature, I realized that I needed to make sure that those images were sharp and perfectly exposed, that the light was nice and the light-angles good, and that the images were pleasingly designed. (By the way, those images sold extremely well...) Whatever natural history subjects you choose to photograph, it is imperative that you make sharp, well exposed images, that you choose and use light well, and that you come up with interesting compositions.

In this chapter, I offer a collection of my favorite non-avian subjects along with the technical data. I will also share with you how and why I went about creating each image. Enjoy and learn.

Brown Bear with clam, Katmai National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/5.6.

As soon as I got comfortable being around the bears, I got right down on the ground so that I could create images featuring soft, out-of-focus backgrounds, just as I do when photographing my beloved shorebirds. The large fairly dark subject balanced the lighter background, so I went with the meter reading. Then using One-Shot AF, I focused on the bear's eye and recomposed, placing the animal a bit back in the frame.

It Ain't Just Birds

Wildlife Gallery: Portraits and Behavior

Leopard, Samburu National Park, Kenya

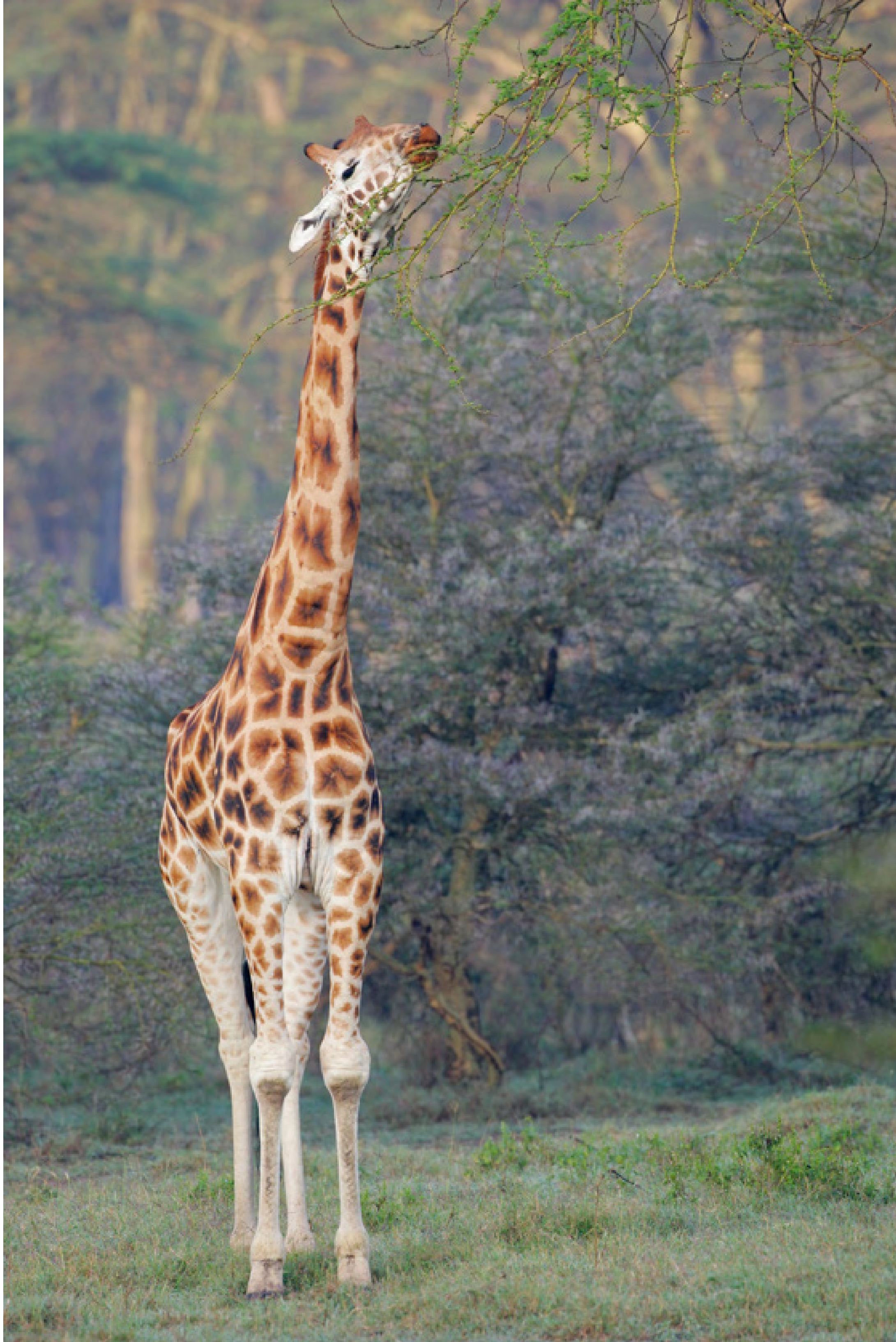
Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 1000. Evaluative Metering +1/3 stop: 1/160 sec. at f/8.

Our van—we were fourteenth in line—was the last to arrive as the animal slept on a rock just a bit after sunset. We had no chance. Hoping against hope, I put on the 2X teleconverter.. Then the leopard stood up. I was ready and made one of my favorite African images. In an effort to maintain a relatively fast shutter speed, I had added only 1/3 stop of light. As a result, I needed to open this one up (i.e. lighten it) in Photoshop.

Nile Crocodile, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/8.

The "S" curve of the animal's body works well here. This big croc kept opening its mouth ever so slowly as the sun came out. We stayed with it for more than thirty minutes hoping for "the big one," but the sun went behind a wall of clouds and the croc shut his mouth and swam away.



Rothschild's Giraffe, Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400.
Evaluative Metering at zero: 1/320 sec. at f/5.6.

Having the distant horizon line cut the animal in half is often a problem when photographing giraffes; the nearby forest background here eliminated that concern. With the animal reaching high for some green tidbits, this is my favorite giraffe image. The cloudy bright conditions were perfect as I would have been way off of the proper sun angle had it been a clear day.

both: Defassa Waterbuck and Lesser Flamingoes Lake Nakuru, Kenya

left: Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/800 at f/8.

right: Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1600 at f/5.6.

What can you learn by studying these two images?

#1. When you have a cooperative subject, be sure to vary your focal lengths and to adjust your compositions accordingly. With the 500 lens alone, horizontal format was best. Once I added the 2X, vertical format was the obvious choice.

#2. If you study the exposure data carefully, you will see that the two exposures, 1/800 at f/8 and 1/1600 at f/5.6 are equivalent. Why was the image on the left made at -1/3 stop while the image on the right was made at the metered exposure? In the vertical image, the meter saw the centered, relatively dark subject and opened up (let in more light). A 1/3 stop ***underexposure*** *was needed to keep from overexposing the background flamingoes. In the image on the right, the lighter-toned grass, water, and flamingoes had more influence on the meter reading than the darker, relatively small-in-the frame subject. In each case, I checked the histogram after making the first image to verify that my thought processes were indeed correct.*

#3. I chose the widest aperture in each case here to ensure that the flamingoes would be rendered as softly focused as possible.

#4. Careful observers will note that I chose to position the van about 15 degrees off of the correct sun-angle. Why? Had I used the perfect sun-angle, the two closest flamingoes (the ones on the center-right frame edge in the horizontal image) would have been placed right behind the waterbuck's head.

Eland and Yellow-billed Oxpecker, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/800 sec. at f/9.

With the sun out, the metered exposure was perfect. Note that the shutter release was timed to capture the raised tail.

Eland, old bull, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/250 sec. at f/5.6.

We had been photographing four young eland when this big buck strode out of the bush. With the soft light and the light-toned grass background, I added 1/3 stop of light to move the histogram to the right; doing this produced a file with lots of color information and little noise.

both:
African Lion, male
Lake Nakuru, Kenya

left: Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/5.6.

right: Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/11.

When we came upon this lion, he was sleeping with his head very close to a tree trunk. Though it was early in the afternoon, it was a bit cloudy; the quality of the light was not bad. For the most part, though, I was just not interested... Fortunately, I did not have a teleconverter mounted on the 500; when the lion yawned I did not get too excited, I simply pointed and fired and made two images. The lion had raised its head just enough to put the tree out of the frame stage right. The first of the two images turned out to be one of my favorites of the trip. Life is like a box of chocolates... And so is nature photography.

After the yawn, I put on the 2X (image above) so that I could make some tight images of the mane. Including the diagonal layers of folded skin added greatly to the success of the image.

African Lion, young male peering over Wildebeest carcass, Maasai Mara, Kenya

Canon 500mm f/4L IS lens (handheld) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/5000 sec. at f/4.

I climbed atop the cab of the safari van, sat on the folded roof hatch, and handheld the 500 in an effort to get high enough to avoid the grasses in front of the subject. I love the early golden light and the animal's stare, but wish that the young lion had lifted its head a bit higher so that its chin was not obscured by the gnu carcass.

African Lion, same young male trying to break the skin on the Wildebeest carcass, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with the EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/5000 sec. at f/4.

This image was made 45 minutes later than the one on the facing page from the same position, but this time with the lens on a tripod with the legs shortened. Note the difference in the color of the light in the two images. With the softer, warmer light (image left) I needed to add 1/3 stop of light, but with the harsher somewhat colder light (image above) I needed to subtract 1/3 stop of light to avoid over-exposing the highlights.

African Lion
same young male after eating
Maasai Mara, Kenya

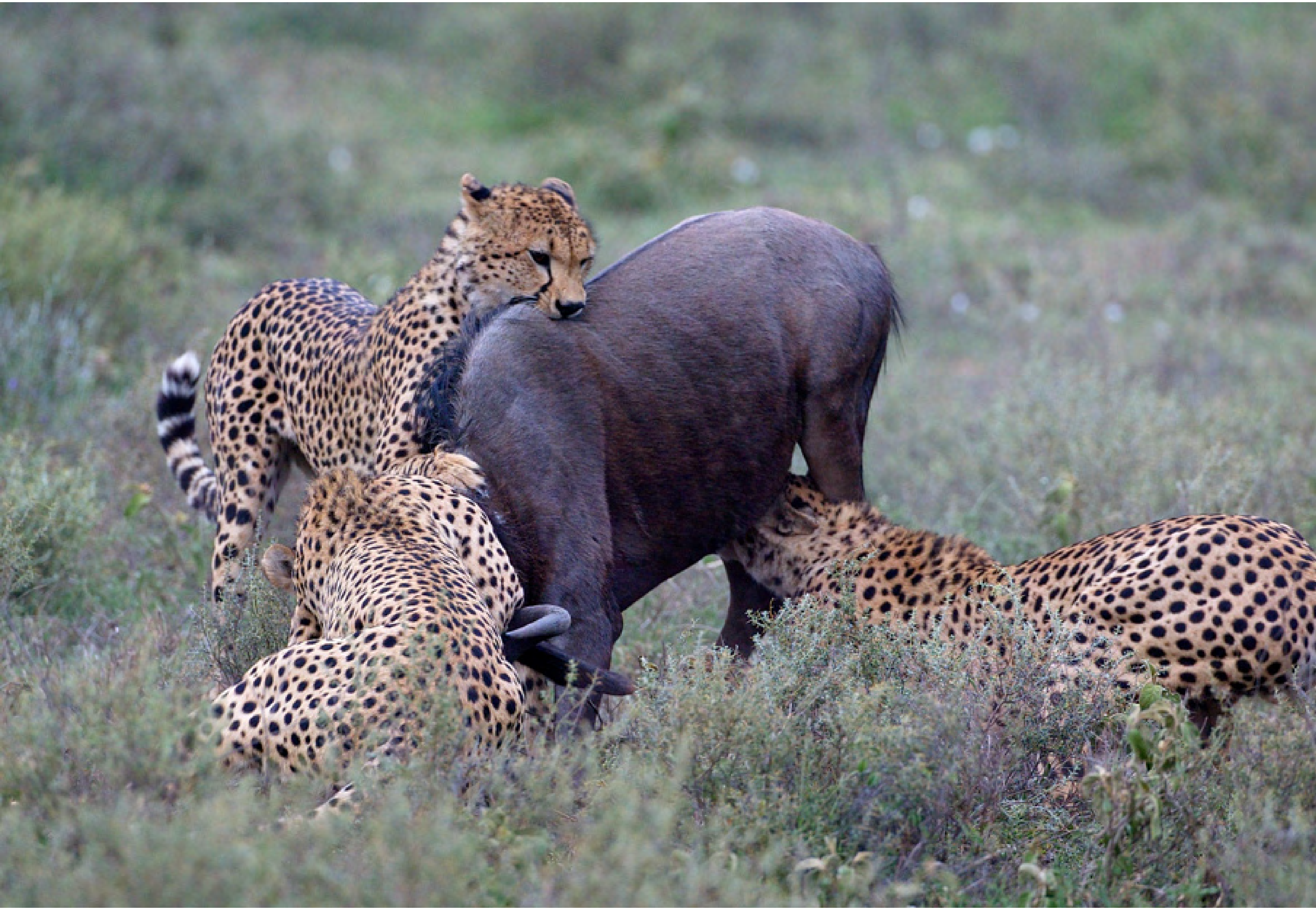
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250.
Evaluative Metering -1/3 stop set manually: 1/320 sec. at f/14.

As the morning progressed, the light became ever harsher. I used a reverse Curves adjustment on this image to decrease the contrast and dodged (lightened) the shadowed upper portion of the eye. A somewhat faster shutter speed would have reduced the motion blur evident on the tip of the tongue. The detail in the tongue was recovered by reducing saturation in the red channel.

African Lioness, female yawning, Maasai Mara, Kenya

Canon 70-200mm f/2.8L IS lens (handheld at 125mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/10.

We had been in a perfect position to make tight head shots of this lioness yawning, but as van leader, I had asked the driver to move just moments before. "Hold it!" I said as she began to yawn and roll over. I grabbed the 70-200 and made a long series of her yawning, taking care to position her in the lower right corner of the frame. This is a good example of the classic rule of thirds.



left:
Cheetah brothers dispatching Wildebeest
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/160 sec. at f/5.6.

The breathtaking chase was over in seconds... I was so nervous photographing the kill that I cut off the rear end of the right-hand cheetah in all of my best images...

right: Maasai Giraffe
Tarangire National Park, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/100 sec. at f/5.6.

Introducing diagonal elements can help to create interesting compositions. Having the diagonal line—in this case the giraffe's neck—enter the frame from a corner of the image adds strength to the design. In most low-light situations, adding 1/3rd stop of light will move the histogram a bit to the right without sacrificing highlight detail.

left:
Common Zebra
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero set manually: 1/1000 sec. at f/8.

This image was inspired by seeing too many of Todd Gustafason's tight close-ups of the faces of African mammals. I used AI Servo AF and central sensor (by necessity) and focused on the zebra's eye. This placed the eye in the center of the frame so I cropped a bit from the rear (and the top and bottom as well) to wind up with the image that I had visualized. The image was then up-sized to 48MB using Bicubic Smoother extrapolation.

above: Common Zebra, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/800 sec. at f/5.6.

When making backlit images it can help to add a bit of light to the suggested exposure if there is no bright rim-lighting. With the relatively soft backlight here, I did just that. The dark bush on the upper left horizon-line balances the composition.

Common Zebra swimming hard in Mara River, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/2000 sec. at f/4.

If you are extremely lucky, you will get to witness a crossing of herd animals on migration. If the animals are gathering at a crossing spot, it is imperative that your van stay well back as the animals are always very nervous before a crossing. You would be nervous too if you thought that an eighteen- foot Nile Crocodile might be waiting to chop you in half...

Common Zebras, adult and young crossing, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/2500 sec. at f/4.

Adult and young zebras and wildebeests often cross side by side. Placing the central AF sensor on the adult's eye resulted in a pleasingly designed image.

both: Wildebeest(s) crossing Mara River, Maasai Mara, Kenya

above: Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/1000 sec. at f/5.6.
right: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/1600 sec. at f/5.6.

Being able to put on or remove a teleconverter quickly is an important skill for anyone using long lenses for just about any type of photography. Even a momentary fumble often results in a missed opportunity. There have been rumors of a Canon 150-600 IS L zoom around for years. If such a lens ever materializes it would be a great safari lens.

above: Wildebeest herd crossing, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/800 sec. at f/11.

Here, I chose a sensor along the bottom edge of the 45-point ellipse to place the swimming animals in the lower portion of the frame.

right: Wildebeest climbing bank after successful crossing, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/11.

It looked as if we would be blessed with a huge crossing, but after two small groups crossed, the rest of the herd opted to look for another spot. After the excitement died down, I was really upset with myself for having mis-framed this image. I left too much empty river on the bottom of the frame while cutting a group of animals higher on the bank in half. Had I simply raised the lens a bit, I would have easily been able to fit both groups into the frame.

Wildebeest herd gathering, Maasai Mara, Kenya

Canon 70-200mm f/2.8L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/4000 sec. at f/2.8.

Large groups of Bearded Gnus often gather before a crossing. About one hundred gnus from this group had crossed farther on up the river. The remainder of the group then began walking directly towards us. As there were several steep game trails that led down to the river right near our vehicle, excitement built to a fever pitch as more and more animals joined the herd. Nearly a thousand wound up milling around for nearly an hour before deciding ***not*** *to cross. Disappointment reigned in our safari van as the animals simply turned tail and headed off-stage left. In retrospect, we realized that we should have re-positioned our van when the herd began to approach to give them a bit more room..*

Wildebeest with newborn, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 400mm f/5.6L lens with EOS-1D. ISO 640. Evaluative Metering at zero: 1/160 sec. at f/5.6 (and lightened in Photoshop).

Having a beanbag handy atop the safari vehicle and using it with your intermediate telephoto lenses helps ensure sharp images. The predawn light here created a blue cast, which was warmed up by using Create Adjustment Layer/Photofilter/81A/25%. Careful positioning of the van resulted in a nicely balanced composition. If you see wildebeest running crazily about, especially in the early morning, be sure to check for a protruding baby gnu!

Land Iguana, South Plaza Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens with 1.4X II TC (handheld at 245mm) and EOS-1D Mark II. ISO 640. Evaluative Metering at zero: 1/160 sec. at f/5.6 (and then lightened in Photoshop).

To ensure a soft, out-of-focus background, I got right down on the ground to effectively "move" the terrain farther from the subject's head.

Marine Iguana, Fernandina Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens w/1.4X II TC, 25mm extension tube and EOS-1D Mark II. ISO 400. Evaluative Metering -1 1/3 stops: 1/160 sec. at f/10.

With a large black area in the center of the frame and the bright salt deposits on the iguana's head, I knew that I would need lots of underexposure to keep from burning the highlights. I often combine a teleconverter and an extension tube when I need more magnification.

Marine Iguana and Sally Lightfoot Crab, Point Espinosa, Fernandina Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/125 sec. at f/5.6.

I liked the curve of this guy's tail and pointed him out to several members of the group. They came and went but I stuck with it and was rewarded when the large, colorful crab climbed right up and over the top of my subject. I used the Photofilter/81A/12% to warm the scene and used a reverse Curves adjustment to reduce the contrast.

Marine Iguanas, Suarez Point, Hood Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens (handheld at 105mm) with EOS-1D Mark II. ISO 800. Eval. Metering +1/3 stop: 1/80 sec. at f/14 in Manual Mode.

I selected these two as subjects because of their obvious affection for each other...

facing page:
Marine Iguanas
Point Espinoza
Fernandina Island
Galapagos, Ecuador

Canon 28-135mm IS lens (handheld) at 44mm with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/40 sec. at f/5.6.

We came across several large aggregations of Marine Iguanas so it was only natural to grab a short lens rather than a long one...

right:
Marine Iguana skeleton, Point Espinoza
Fernandina Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens (handheld at 150mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/200 sec. at f/4.

In a land with such a profusion of life, death is a commonplace occurrence. In retrospect, I should have stopped down quite a bit here to render the near leg and the claws sharp. I went to Galapagos without the tripod collar for my 70-200 and that is a mistake that I shall not make again. With the tripod collar I would have been able to mount the lens on the Wimberley in a pinch and use some really slow shutter speeds and small apertures.

Raccoons, baby kissing adult, Ding Darling NWR, Sanibel, FL

Canon 100-400mm L IS zoom lens (handheld at 135mm) with Canon EOS-1Ds. Evaluative Metering at zero: 1/80 sec at f/5.6.

Many of the birds and animals on Sanibel Island are acclimated to humans. I sat down on the road to get down to the raccoons' eye level.

Moose, cow nuzzling bull, Power Line Park, Anchorage, AK

Canon 300mm f/4L IS lens (handheld) with Canon EOS-1Ds. Evaluative Metering -2/3 stop: 1/4000 sec. at f/4.

If you would like to photograph big mammals, it pays to hire a great guide—Nick Fucci in this case. Nick no longer lives in Alaska.

left:
California Sea Lion
LaJolla, CA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/80 sec. at f5.6.

In winter, a few California Sea Lions often congregate at the bottom of the Cave Store Cliffs to the right of the viewing platform. Climbing half way down reduces the angle of declination to the subject and results in more intimate images. I raised the ISO in hopes of being able to make some sharp images in the very low light of a cloudy early morning. When a bird or animal stares down the barrel of the lens, the resulting photographs are almost always quite striking.

facing page:
Harbor Seal, Children's Cove, LaJolla, CA

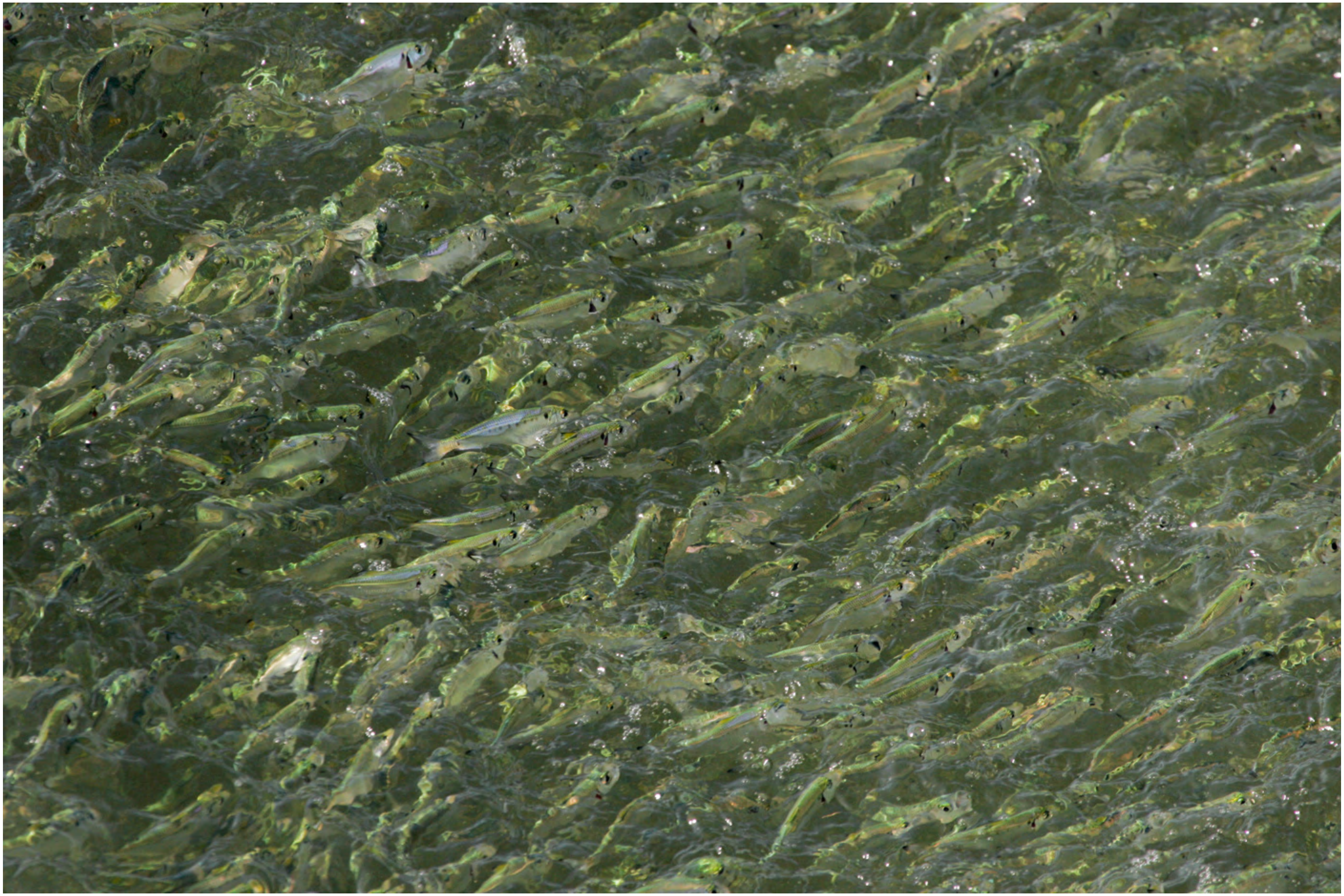
Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/200 sec. at f/11 set manually (after histogram review).

Placing the subject on the horizontal centerline three-quarters of the way into the frame works well with many mammals.

Puffer (Blowfish), dead, Fort DeSoto Park, Tierra Verde, FL

Canon 600mm f/4L IS lens with 25mm Extension Tube and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/4.

I found this guy—most likely a red tide victim—half buried in the windblown sand. Even though he was dead, he looked cute...
I first photographed him at ground level and then, as an afterthought, made a few images while standing behind my tripod.
Those were my favorites, as you could better see the collar of sand around the fish. Notice my choice of the wide-open aperture.



Baitfish massed on surface, Skyway Bridge/North Fishing Pier, St. Petersburg, FL

Canon 400mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1 stop: 1/800 sec. at f/8.

The quantity of baitfish in the Gulf adjacent to this pier can be staggering. Here, I used my favorite flight lens to fill the frame with the wriggling fish. Lots of birds, including Brown Pelicans, Laughing and Ring-billed Gulls, Royal and Sandwich Terns, and Great and Snowy Egrets, are attracted to the huge schools of bait. Because the water was such a dark green, I underexposed 1 full stop to avoid burning out the highlights.

facing page:
Sally Lightfoot Crab
Puerto Ayora
Santa Cruz, Galapagos

Canon 500mm f/4L IS lens with 25mm Extension Tube and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/4.

This species was common on many of the islands. I let some folks on the tour borrow my rig and forgot to switch from J-PEG back to RAW capture. The J-PEGs were far more contrasty than the RAWs would have been. Here I used a reverse "S" curve to reduce the contrast.

right:
Scallop (smiling)
Fort DeSoto Park, Tierra Verde, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/125 sec. at f/18.

I found this scallop on a cluttered portion of the beach, moved it a few yards to some clean, wet sand, and had to wait a few minutes for him to smile. After I made my images, I tossed the bivalve back into the Gulf.

Rio Grande Leopard Frog, Los Colmenas Ranch, Edinburg, TX

Canon 500mm f/4L IS lens with two 25mm Extension Tubes and EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/125 sec. at f/6.7.

I went to ISO 800 as these guys were resting in the shade of the blind in early morning.

Sea Otter with pup, Cordova, AK

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/160 sec. at f/11.

Getting close to sea otters is always a challenge... The seas were sloppy and the boat was rocking so much that I had a problem keeping the central (by necessity) sensor anywhere on the subjects. Without image stabilization I would not have had a chance to make even a single sharp image.

It Ain't Just Birds

Brown Bear Gallery

In June 2004, I visited Katmai National Park for the first time. I was leading the trip for Alaska Photo Tours. We lived on Chuck Keim's boat, "Coastal Explorer" and traveled to the various photo locations in a most convenient 25-foot skiff. At first we were quite nervous about being close to the coastal Brown Bears as they are simply large grizzly bears (*ursus horribilus*). Most adults are more than capable of killing a human.

A few years back, the infamous Timothy Treadwell (and his most unfortunate girlfriend) were killed and eaten by an old, starving boar (male bear) in Katmai. On that fateful night, he had set up his tent right on a bear trail and confronted the bear that wound up having him for dinner several times.

Chuck Keim has been guiding photographic groups for more than a decade and within a few hours we were quite comfortable around the bears. Chuck is pretty much on a first-name basis with all of the bears. On that first trip we found many bears resting in the meadow at Hallo Bay and many others digging and feeding on clams on various mud flats. Chuck taught us to stay together, to move slowly, and—for the most part—to let the bears approach us. "Most importantly," he cautioned us, "never run from a bear."

I had a second great trip to Katmai with Chuck in September 2005. On that trip the bears were stuffing themselves with chum salmon in the creek at Kinak Bay. I followed that up with a trip to Silver Salmon Creek Lodge where we got to photograph the bears catching silver salmon. And the humans did a pretty good job of catching our limits of silvers whenever we so desired.

I have come to know these coastal Brown Bears as gentle creatures and dedicated parents. There was one female at Kinak who we nicknamed "Super Mom." She caught fish after fish for her two large cubs, in fact, she caught many more salmon than the other fifteen or so bears combined. And if another bear caught a salmon anywhere within sight of her, she would chase it for as much as a thousand yards, steal the fish, and then bring it back to her kids.

Brown Bears at Kinak Bay, Katmai National Park, AK

Canon 28-135mm IS lens (handheld at 50mm) with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/200 sec. at f/11.

On white-sky days, my very strong preference is to expose properly for the foreground and burn the sky, leaving it a detail-less white. If you underexpose the foreground enough to get some detail in the sky, you will be introducing a considerable amount of noise when you lighten the image.
On our September visit to Kinak Bay we had as many as eighteen bears in sight at once. The previous week, at the height of the salmon run, there had been thirty-eight.

Brown Bear, spring cub
Kinak Bay
Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 800. Evaluative Metering -1/3 stop: 1/320 sec. at f/4.

This seven-month old cub was resting butt-to-butt with momma. Despite my relatively close approach she never even glanced at me. After reviewing the histogram I went to -1/3 stop to ensure that I would not burn out the natal collar, the patches of light gray fur on either side of the cub's neck.

Once the little bear put his paws around its snout it was just a matter of waiting until it opened its eyes. My patience was rewarded with an endearing image.

Brown Bear chewing salmon, Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/1250 sec. at f/4.

I was on the shadow side of this bear when he caught a big salmon, so I made my way quickly but safely around him. Though he looks menacing, he was simply chewing on a chum salmon. Early morning light and relatively clean background add to the success of this image.

Brown Bear cubs sitting up, Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/5.6.

When I saw these two sitting up, I borrowed a boat cushion from Chuck and got right down on the ground, resting the barrel of my lens on the cushion. I chose to add the teleconverter rather than approach the cubs and possibly scare them off. I should have borrowed two boat cushions and avoided losing the paws of the cub on our right behind the out-of-focus gravel bank... These were Super Mom's cubs.

left: Brown Bears fighting
Kinak Bay
Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/320 sec. at f/5.6.

We witnessed several squabbles over fishing rights but nothing too serious. Whenever you are trying to make an image of two subjects in a horizontal frame, using the widest AF array that your camera offers is often the way to go. Here, I chose 45-point AFPS and it worked well. If I had used the central sensor, it would have focused on the background ***between*** *the two bears...*

right: Brown Bear standing in creek
Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 1000. Evaluative Metering at zero: 1/160 sec. at f/4.

Super Mom was walking right towards me in the creek when she stood up to look for salmon. With wet bears, cloudy conditions are ideal. My second trip with Chuck was pretty much the first time that I set a White Balance other than Auto. Choosing either Cloudy or Shade eliminated strong blue casts. As long as you are making your images in raw mode, changing the white balance during conversion is a snap. I do all of my conversions in BreezeBrowser.

left: Brown Bear
shaking salmon/roe flying
Kinak Bay
Katmai National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/500 sec. at f/5.6.

When you are working in low light and the possibility of action exists, it is best to switch to a high ISO as I did here.

right: Brown Bear with chum salmon
Kinak Bay
Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/400 sec. at f/4.

By watching the bears carefully as they fished, we learned to anticipate a catch. The bears flop around after the salmon and attempt to jump on top of them. When they get one, they hold it down with their front paws with their head underwater. Then they would come up for air without a salmon. Now, here's the trick: when they put their head back underwater they always emerge with a salmon.

Brown Bear silhouette, Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering -2 1/3 stops: 1/1600 sec. at f/29.

I saw this bear walking into the brilliantly backlit water, set my camera appropriately, and got as high as I could by pulling the tripod legs in a bit. This allowed me to avoid a merge between the upper part of the bear and the dark areas of the background.

Brown Bear with salmon remains, Kinak Bay, Katmai National Park, AK

Canon 28-135mm IS lens (handheld at 70mm) with EOS-1D Mark II. ISO 800. Evaluative Metering -1/3 stop: 1/640 sec. at f/3.5.

After photographing this bear (squishing roe out of the salmon) with the 70-200mm f/2.8L IS lens, I saw a wider image that would include the pinkish red fireweed. I moved to my left so that the small hill would appear diagonally opposite the bear and balance the composition.

facing page:
Brown Bear emerging after flopping on fish
Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 200. Evaluative Metering at zero: 1/8 sec. at f/20 in Tv mode.

Here I created an image that showed the water cascading off the bear as it emerged after attempting to flop down on a salmon. I used a very slow shutter speed to blur the water. When making intentionally blurred images, I usually work in Tv mode to ensure control of shutter speed.

right:
Brown Bear holding chum salmon
Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/1250 sec. at f/4.

Though I love the bear's claws on the fish, I wish that I had moved a bit to the right for a better head angle... Working this close made the choice of vertical format an easy one.

Brown Bear with tongue out, Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/5.6.

With a relatively small-in-the-frame bear and lots of white water in the background, +2/3 yielded a good histogram.

Brown Bear, spring cub walking, Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/500 sec. at f/5.6.

When I saw this young bear walking towards us at a good pace, I increased my ISO from 400 to 800 to ensure a motion-freezing shutter speed.

facing page:
Brown Bear boar close-up of paw Kinak Bay, Katmai National Park, AK

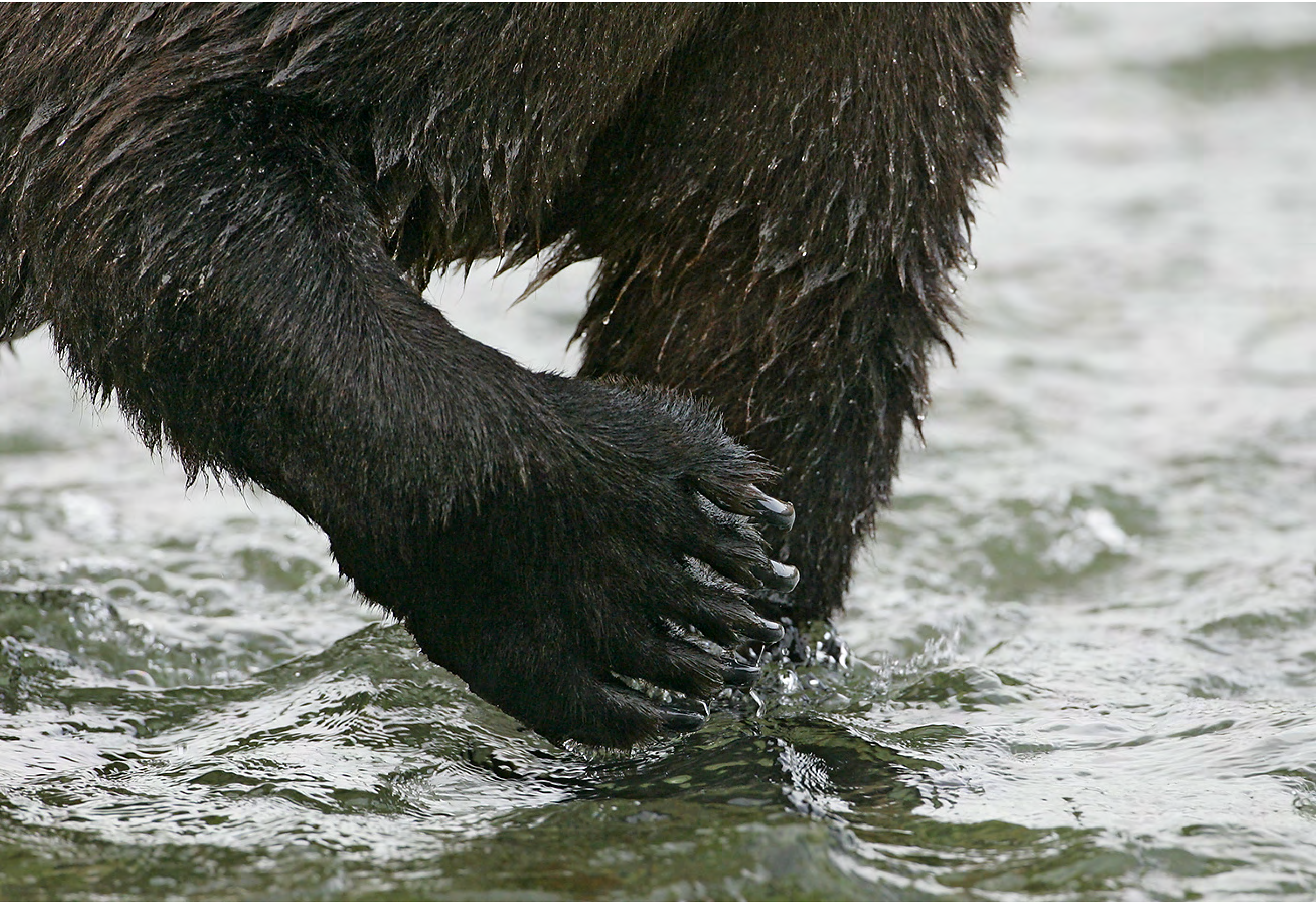
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 800. Evaluative Metering -1/3 stop: 1/400 sec. at f/5.6.

The claws on the forepaws on these bears are much longer than the claws on the rear paws. I made this image just as the bear lifted its paw out of the water. Timing the release of the shutter so as to capture the image that you want when photographing animals or birds walking is an important consideration.

above:
Brown Bear family, Kinak Bay, Katmai National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/4.

Super Mom poses with her nineteen-month-old twins but is ever on the lookout for more salmon. Though these bears were often standing or resting close together, it was difficult to make a good image because they rarely if ever looked in the same direction. Two out of three ain't bad, and making the photo when the darker cub was resting its head on the lighter bear's side added intimacy to the image.



left:
Brown Bear
with silver salmon,
Silver Salmon Creek Lodge
Lake Clark National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/1600 sec. at f/5.6.

With the soft light, I knew that I would not need to underexpose to keep from blowing out the highlights on the salmon's belly.

The September rainfall had been eight times normal when we arrived at the Lodge. The creek, normally fifty feet wide and a few inches deep in most places, was more than one hundred yards across and four feet deep in spots. Though these conditions limited our mobility, they allowed us to create a variety of new and different images, many featuring clean backgrounds.

The bears were not the only ones catching salmon at Silver Salmon Creek Lodge. I'm the smiling one.

Photo courtesy of and copyright Robert O'Toole

left: Brown Bear silhouette
Silver Salmon Creek Lodge,
Lake Clark National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/400 sec. at f/20.

With our mobility limited by the unusually high water levels, we needed cloudy conditions during the morning low tides; for the most part, we were blessed. The wide, braided river and the wide-open spaces allowed us to create many unique images. When making silhouettes, it is important to avoid having the dark subject merge with any dark or black background elements (in this case, the strip of outer beach).

right: Brown Bear standing
Silver Salmon Creek Lodge
Lake Clark National Park, AK

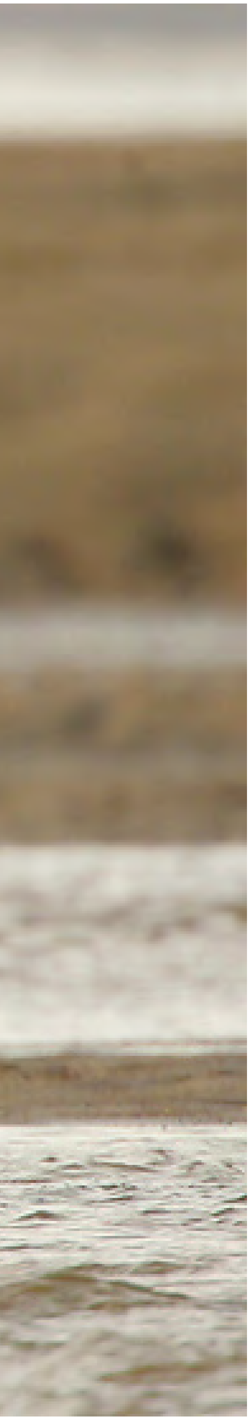
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/5.6.

The soft light made it easy to capture the fine detail in this bear's fur. Though digital capture offers great latitude, doing the same thing with a wet bear on a sunny day is well nigh impossible... When you see something spectacular, it often pays (as it did here) to simply point and shoot rather than to try to make the image more perfect... For me, that is usually easier said than done!

Brown Bear with silver salmon
Silver Salmon Creek Lodge,
Lake Clark National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/500 sec. at f/5.6.

I made the mistake of not bringing my ground-pod but when I saw this bear fishing and catching I could not resist the temptation. I lay right down on the wet sand and gravel and placed the foot of the lens on the ground just as I did before Walt Anderson came up with the ground pod. I knew that I would love the distant trees in the background.



left: Brown Bear with spring cub
Silver Salmon Creek Lodge,
Lake Clark National Park, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/500 sec. at f/5.6.

When designing images, it is important to avoid merges. Here, I waited until there was some separation between the mother bear and the cub. The larger size and the position of the sow says, "I will protect you at all costs, my precious little cub." Images like this that illustrate concepts have great potential as stock photography.

right: Brown Bear paw prints
Lake Clark National Park, AK

Canon 28-135mm IS lens (handheld at 41mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/100 sec. at f/11.

We took a boat ride down the coast on an early morning high tide. We did not have much luck with bears, but I was thrilled to find these prints in the gravelly sand just after sunrise. The low-angled light added texture to both the sand and the paw prints. The wet sand was a perfect middle tone so the metered exposure was an obvious choice. As the beach was angled slightly away from me, I went to f/11 in an effort to make all the prints sharp. I focused on the second print from the bottom, which is about 1/3 of the way into the frame.

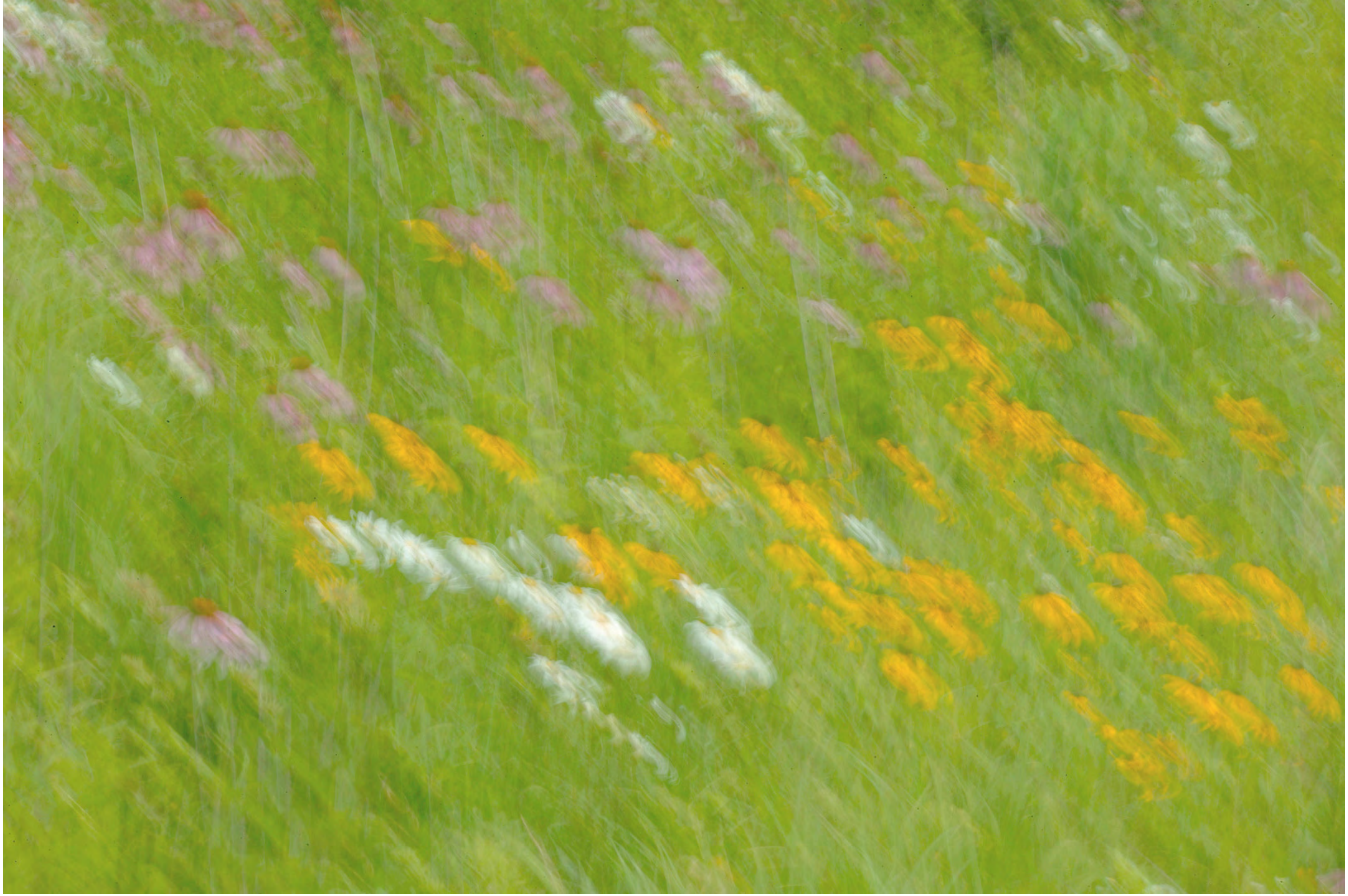
It Ain't Just Birds

Trees, Plants, and Flowers Gallery

Spruce and Yellow Poplar Trees, Silver Salmon Creek Lodge, Lake Clark National Park, AK

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/4.

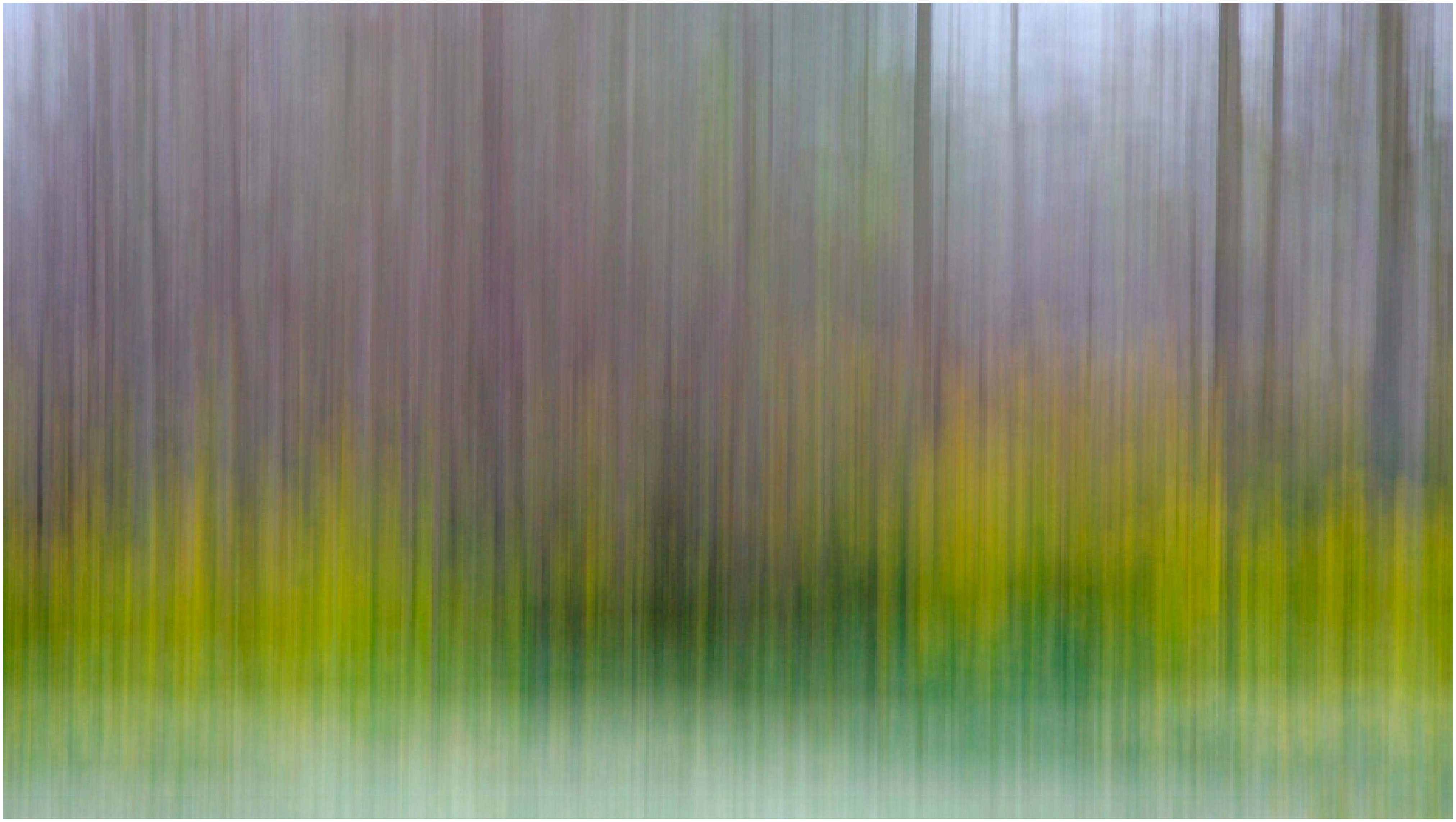
I often use a long lens to extract distant elements that are pleasingly arranged or that otherwise catch my eye.



Prairie Wildflowers, Chicago, IL

Canon 180mm macro lens (handheld) with EOS-1D Mark II. ISO 50. Evaluative Metering at zero: 1/6 sec. at f/32.

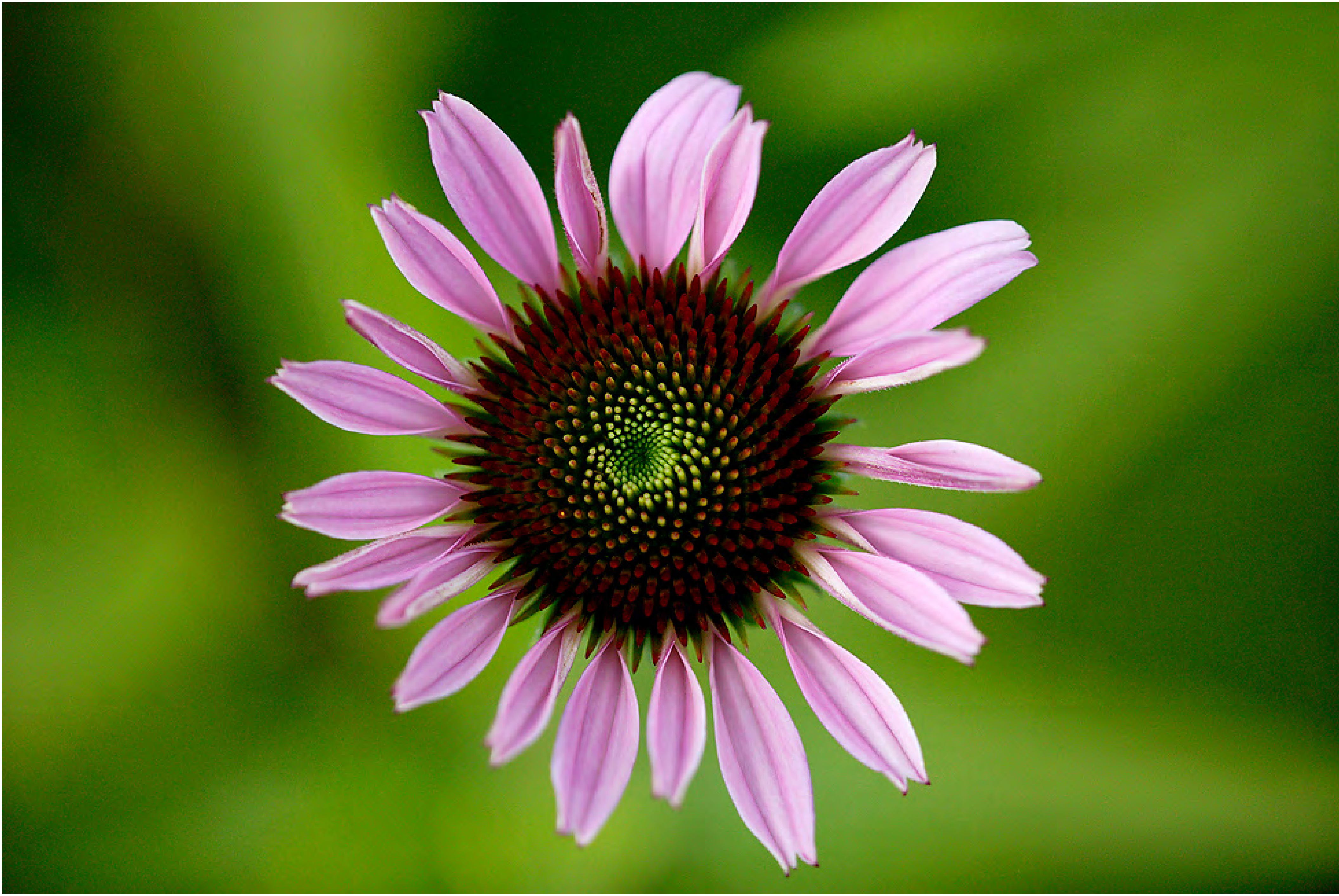
Here I experimented with a variety of shutter speeds and shook the camera intentionally during the exposure to create a Monet-like look.



Cypress Swamp in spring, Lake Martin, LA

Canon 70-200mm f/2.8L IS lens (at 200mm) with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/4 sec. at f/13.

This image was inspired by the work of Jim Brandenburg and influenced by the images of Tony Sweet. The scene is a mix of wildflowers and cypress trunks. I chose to work on a tripod to ensure that when I panned my rig vertically downward the tree trunks would remain true to square. Digital capture allows you to try new ideas without having to worry about the cost of film and processing. For each of the images on this two-page spread, I made two dozen or so photographs and then selected my single favorite from each series. It pays to vary your shutter speed and your panning rate.



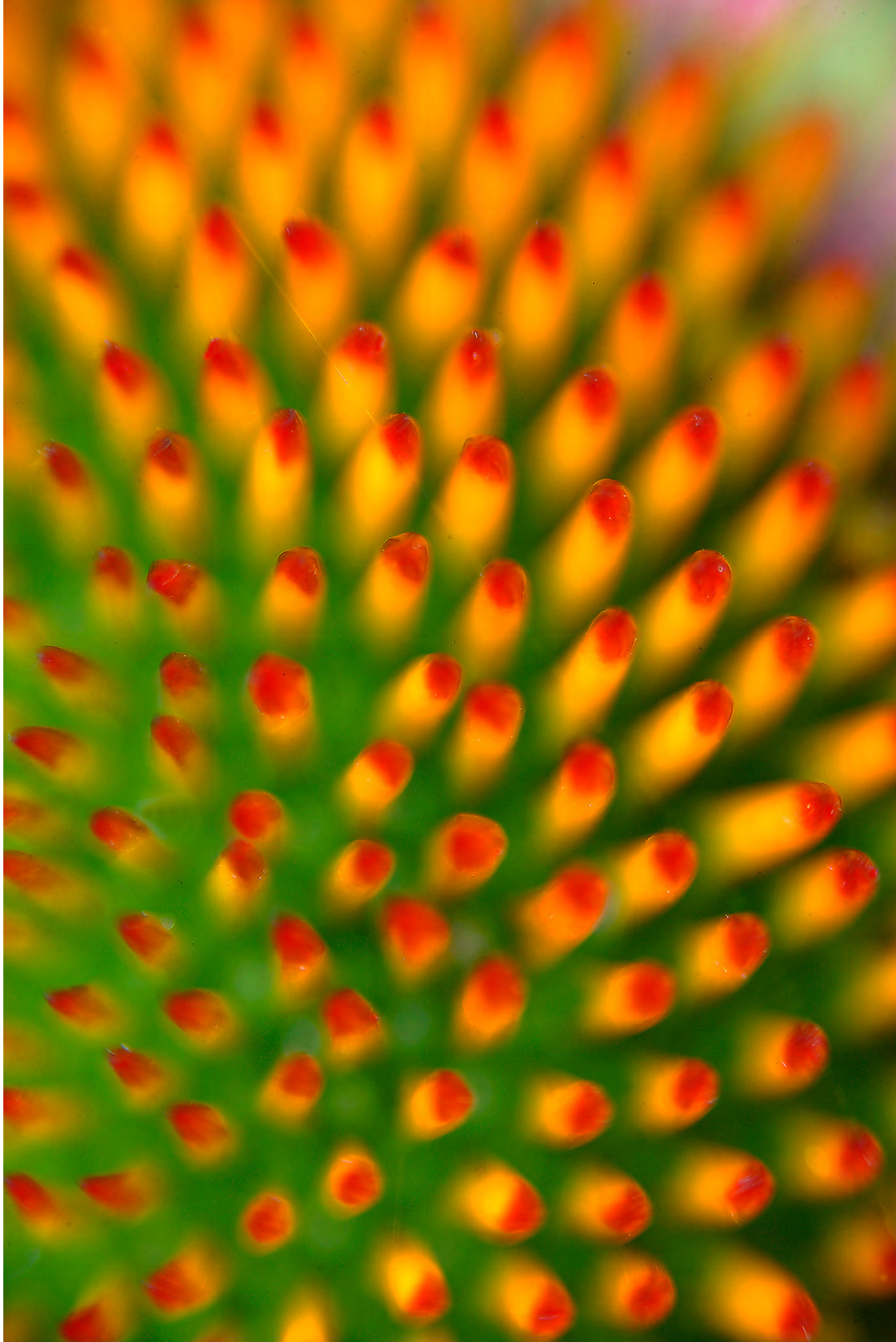
both:
Purple Coneflower
Chicago, IL

left: Canon 180mm macro lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/800 sec. at f/3.5.

I like the centered composition here because of the spoke-like pattern of the petals. Green and purple work well together.

right: Canon 180mm macro lens with 62mm of extension, the 2X II TC, and the EOS-1D Mark II. ISO 50. Evaluative Metering -1/3 stop: 1/13 sec. at f/5. Flash as main light (at 0) with Macro Twin Light.

I was captivated by the patterns formed by the coneflower's tiny spikes. I learned later that each spike is an individual flower. Here I needed to use many of the tools at my disposal in order to create the image that I had visualized.



Flower, Chicago, IL

Canon 180mm Macro lens with EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/60 sec. at f/11. Fill Flash with Macro Twin Light at -1 stop.

To create the soft light on this image, I shaded the flower with the palm of my hand. This produced a soft glow to the petals. Please do not ask me where I came up with the idea...

Iris, Lake Martin, Louisiana

Canon 600mm f/4L IS lens with 37mm of extension and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/14.

I lay down on the road to get the background that I wanted: green vegetation. Notice that even though I used a small aperture, the background is totally suffused. Why? Because the distance from the subject to the background was about forty yards.

Cypress Trees in Swamp, Lake Martin, LA

Canon 28-135mm IS lens at 47mm with EOS-1D Mark II (tripod-mounted). ISO 400. Evaluative Metering +2/3 stop: 3.2 sec. at f/14 with mirror lock and self timer.

To create images like this when working on a tripod, I either turn AF off after focusing or use CF 4-3. Using a ballhead and a Hama Double-Bubble Level makes your life easier when creating scenics. I try to bring a ballhead on trips that offer consistently good scenic opportunities.

Ox-eyed Daisies, Lake Martin, LA

Canon 70-200m f/2.8L IS lens (on Mongoose M-262) at 115mm with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/5 sec. at f/9.

To create zoom blurs I usually start with a shutter speed somewhere in the 1/5 to 1/4 sec. range. After focusing with One-Shot AF, I zoom from a longer focal length to a shorter one during the exposure. Varying your shutter speeds and the zoom rate will of course vary your results. It pays to make a series of images as each will be unique. Do see how you are doing by checking the images on the rear LCD display.

left:
Acacia Tree silhouette
Ndutu, Tanzania

Canon 100-400mm L IS zoom lens (on tripod at 400mm) with EOS-1Ds. ISO 800. Evaluative Metering -1/3 stop: 1/100 sec. at f/8.

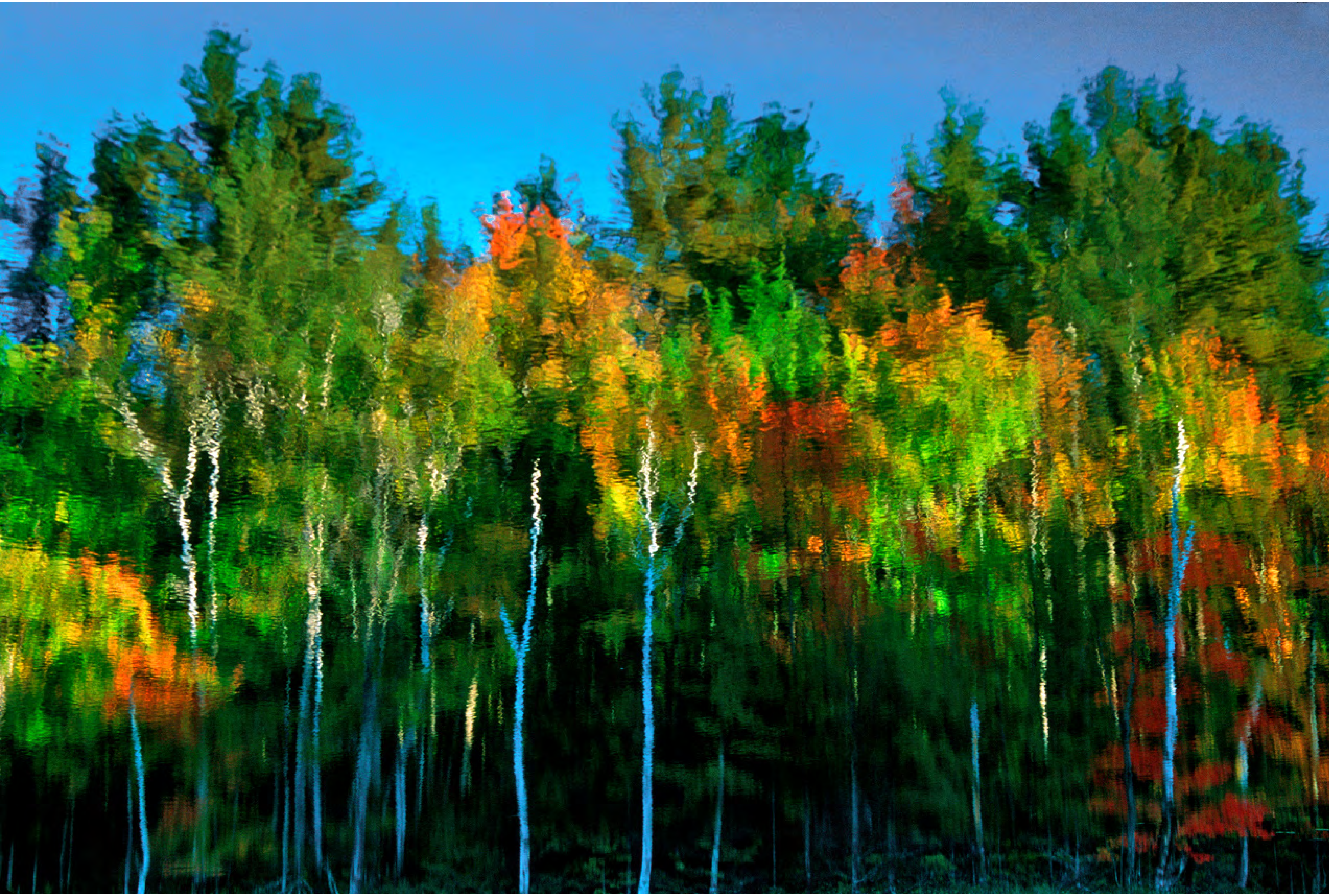
You do not always need a gorgeous sunset to create an effective silhouette.

right: Bamboo stem, Maasai Mara, Kenya

Canon 600mm f/4L IS L zoom lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/60 sec. at f/6.3.

When I shared this image with the group at dinner it was met with oohs and aahs and how-lucky-can-you-gets? "Well," I said, "You have all walked by the bamboo forest several times a day for the past four days. What makes me so lucky? All I did was keep my eyes open and get excited by what I saw." I noted a grin on Todd's face as he fired up his laptop. In a minute, he opened an image remarkably similar to this one. He had even rotated his lens to introduce a diagonal element to the photo. And the framing was pretty much identical. Best of all was the fact that we had in no way communicated with each other about our bamboo pattern images either before or after we created them.

Can you teach creative vision? I am not sure, but I do advise folks to keep their eyes and their minds open!



facing page:
Reflections of fall color
Upper Peninsula, Michigan

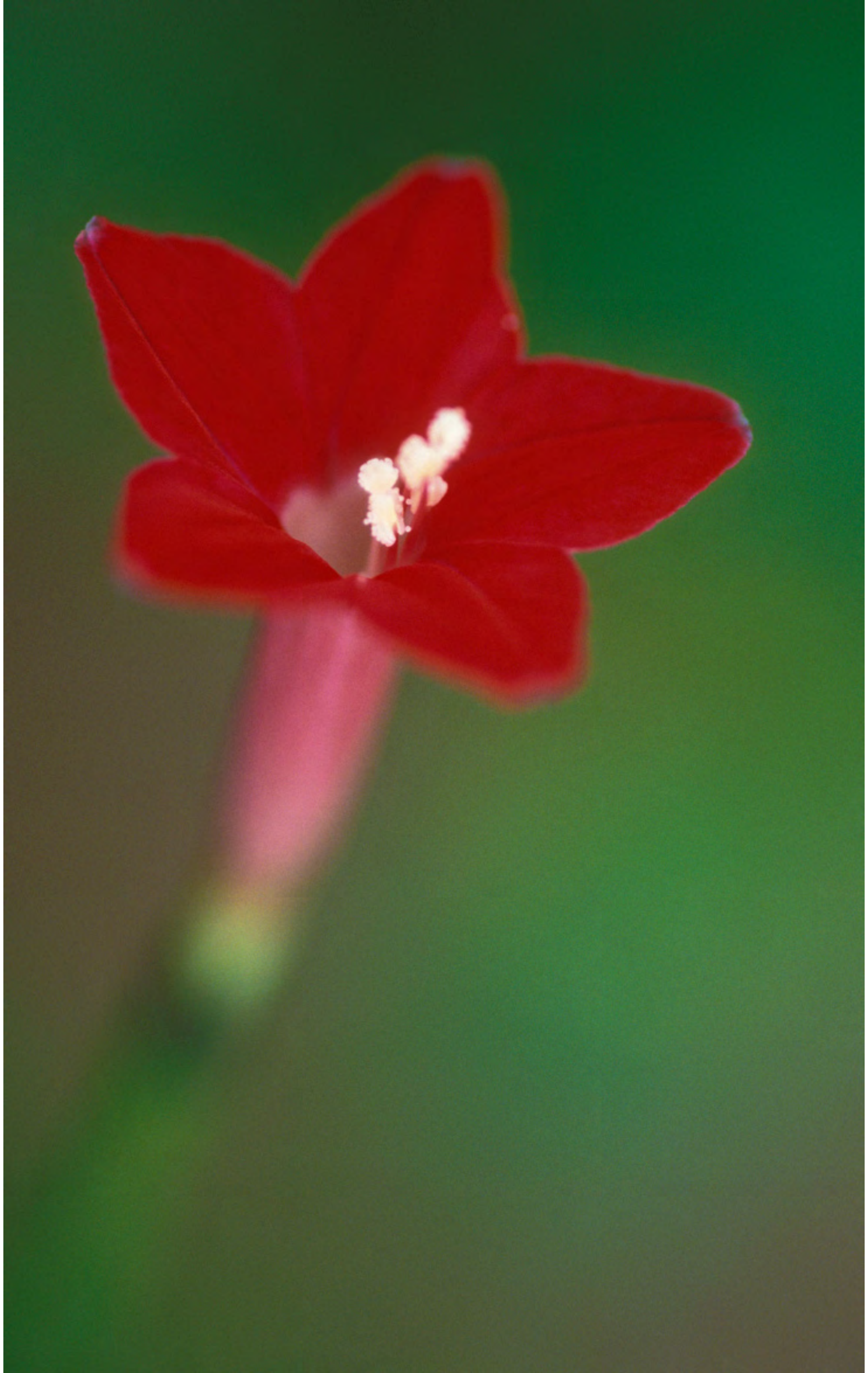
Canon 100-400mm L IS zoom lens (handheld at 180 mm) with EOS-1v. Fuji Velvia pushed one stop at ISO 100. Evaluative Metering -1/3 stop: 1/250 sec. at f/8.

I was making images of the reflections of the fall foliage in a still pond when a sudden breeze came up and created a Monet-like scene. I did, of course, turn the image upside down. You can often create highly impressionistic images by concentrating on reflections and then flopping them. Another advantage of doing so is that contrast levels in a reflection are always lower than contrast levels in the actual scene.

right: American Lotus flower
Lake Kissimmee, Florida

Canon 600mm f/4L IS L zoom lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/400 sec. at f/11.

Here is a flower image true to the BIRDS AS ART style: long lens, clean background, tight and graphic. I made this image while waiting for a female Snail Kite to return to its perch on a still, still morning at Joe Overstreet Landing.



left: wildflower
near Ft. Walton Beach, FL

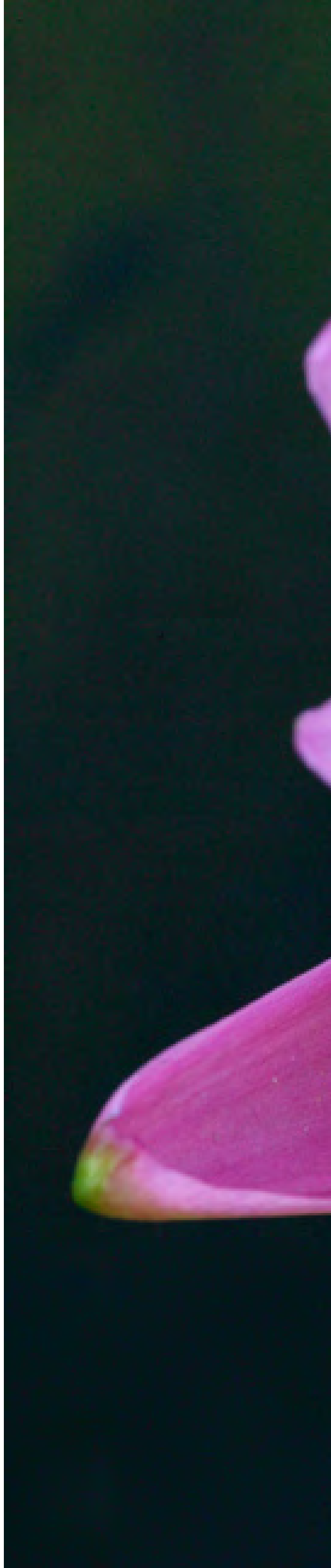
Canon 180mm macro lens with 50mm of extension and EOS-1v. Fuji Velvia pushed one stop to ISO 100. Evaluative Metering at zero: 1/180 sec. at f/6.7.

We drove two hours each way to a garbage dump looking for birds and found these little flowers instead, but it was too windy to photograph them. We drove back the next day and made the images that we wanted. Sometimes you've just got to want it...

right: water lily
Indian Lake Estates, FL

Canon 180mm macro lens with EOS-1Ds. ISO 250. Evaluative Metering +1/3 stop: 1/30 sec. at f/14.

Some folks do not like getting up early or being hot or getting muddy. I had wanted to photograph the water lilies by my home for several years, so on a 95-degree August afternoon I climbed into my neoprene waders and made this image while standing chest deep in the water. Sometimes you've got to want it...



It Ain't Just Birds

Scenics and Patterns Gallery

Scenics

I visit lots of beautiful places, so I am unsure as to why my collection includes so few traditional scenic images. I would think that one reason may simply be that I am not very good at creating them... I am not comfortable using a short lens and feel pretty much helpless with a wide-angle lens in my hands.

Another reason might be that whenever a dramatic scene lies before me there are almost always a few birds, or a large flock of birds, in the picture... I do, however, feel comfortable making bird-scapes, scenic images that feature a bird or a flock of birds as a compositional accent. I view scenics created by the likes of Tim Fitzharris, John Shaw, Jim Brandenburg, and Bill Neill with great admiration and will continue to study their best efforts in hopes of improving my scenic eye.

Flooded creek mouth on stormy morning
Silver Salmon Creek Lodge, Lake Clark Nat. Park, AK

Canon 28-135mm IS lens (handheld at 73mm) with EOS-1D Mark II. ISO 400. Evaluative Metering -2 stops: 1/2000 sec. at f/16.

The stormy sky, the classic S- curve, and the rule of 1/3rds placement of the horizon line are all textbook scenic strategies.

facing page: Slope Mountain
Silver Salmon Creek Lodge
Lake Clark National Park, AK

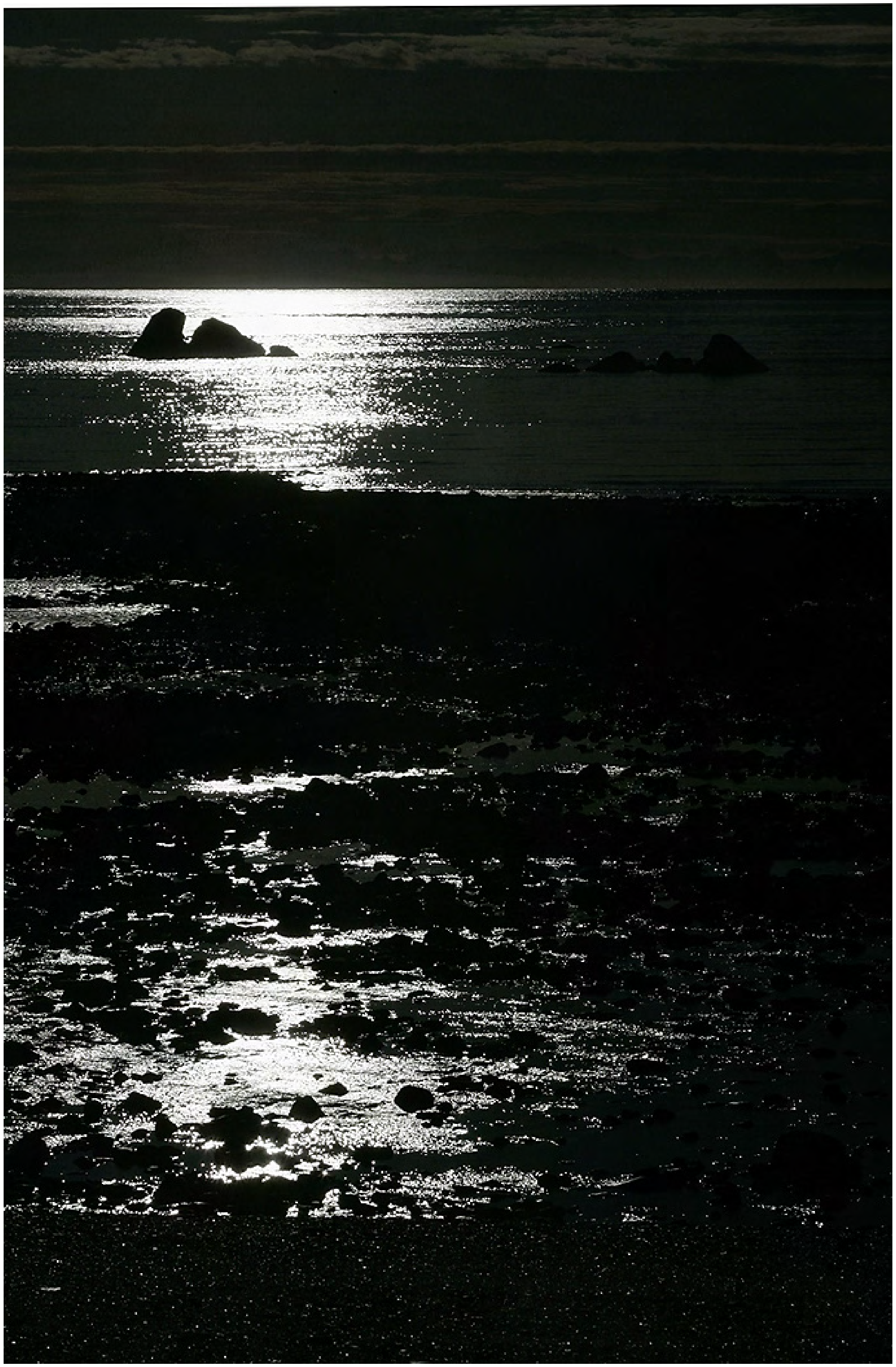
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/8.

My eye was attracted to the rich fall colors of the foliage of the blueberry bushes. I made many similar images, varying my framing for the most part by moving closer to or farther from the mountain. Here I used the small snow field in the lower-right corner as a compositional anchor.

right: rocky beach and offshore rocks
Lake Clark National Park, AK

Canon 70-200mm f/2.8 IS L zoom lens (handheld at 115mm) with EOS-1D Mark II. ISO 160. Evaluative Metering -3 stops set 1 stop darker in Manual Mode: 1/8000 sec. at f/20.

When photographing super-bright backlit scenes like this there are times when three stops of underexposure is not enough to save the highlights. It can be very difficult to see the viewfinder display in these conditions. When the histogram indicates that I need to go darker than is possible in Av mode, that is, darker than -3 stops, I take a meter reading by depressing the shutter button and then press the star button to lock the exposure. Then I turn away from the bright light, note the exposure, calculate the new, darker exposure, and then set that exposure manually. Using the stopdown preview button allows you to see the image as it will look at various apertures.



Mount Galen, Denali National Park, AK

Canon 28-135mm IS lens (handheld at 53mm) with EOS-1Ds. ISO 400. Evaluative Metering -1/3 stop: 1/1000 sec. at f/11.

When using the 1Ds with its 11MP files, there is no problem making a panorama crop.

right: sunset color and hills
Bosque Del Apache NWR, San Antonio, NM

Canon 600mm f/4L IS lens with EOS 20D. ISO 400.
Evaluative Metering -1/3 stop: 1/320 sec. at f/4.

Sometimes a simple composition can be effective.

Patterns

Whenever I am afield with a camera and a lens (or three), I am looking in all directions to see what thrills me; I am often excited by patterns.

I love photographing large flocks of birds (especially with slow shutter speeds), but it is possible to find repetitive patterns of shape, color, or texture anywhere in nature. As a general rule, it is best to completely fill the frame with the pattern, but at times, leaving a small, un-patterned area in a corner of the frame can work well. Once you have chosen the best lens for the job, study the pattern carefully and then design your image. Unless the pattern is perfectly repetitive, you may be able to pick out a particular shape to use as a compositional anchor. Placing the odd shape in a rule-of-thirds position (or at least somewhere off-center) can often add interest to your photo.

cracks in dried mud
Floreana Island, Galapagos, Ecuador

Canon 28-135mm IS lens (handheld at 70mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/80 sec. at f/14.

Rather than just pointing and making an image, I focused on the swirl of smaller shapes and placed them in the lower right-hand corner. This helps lead the viewer's eye around the frame.

glacier details, Cordova, AK

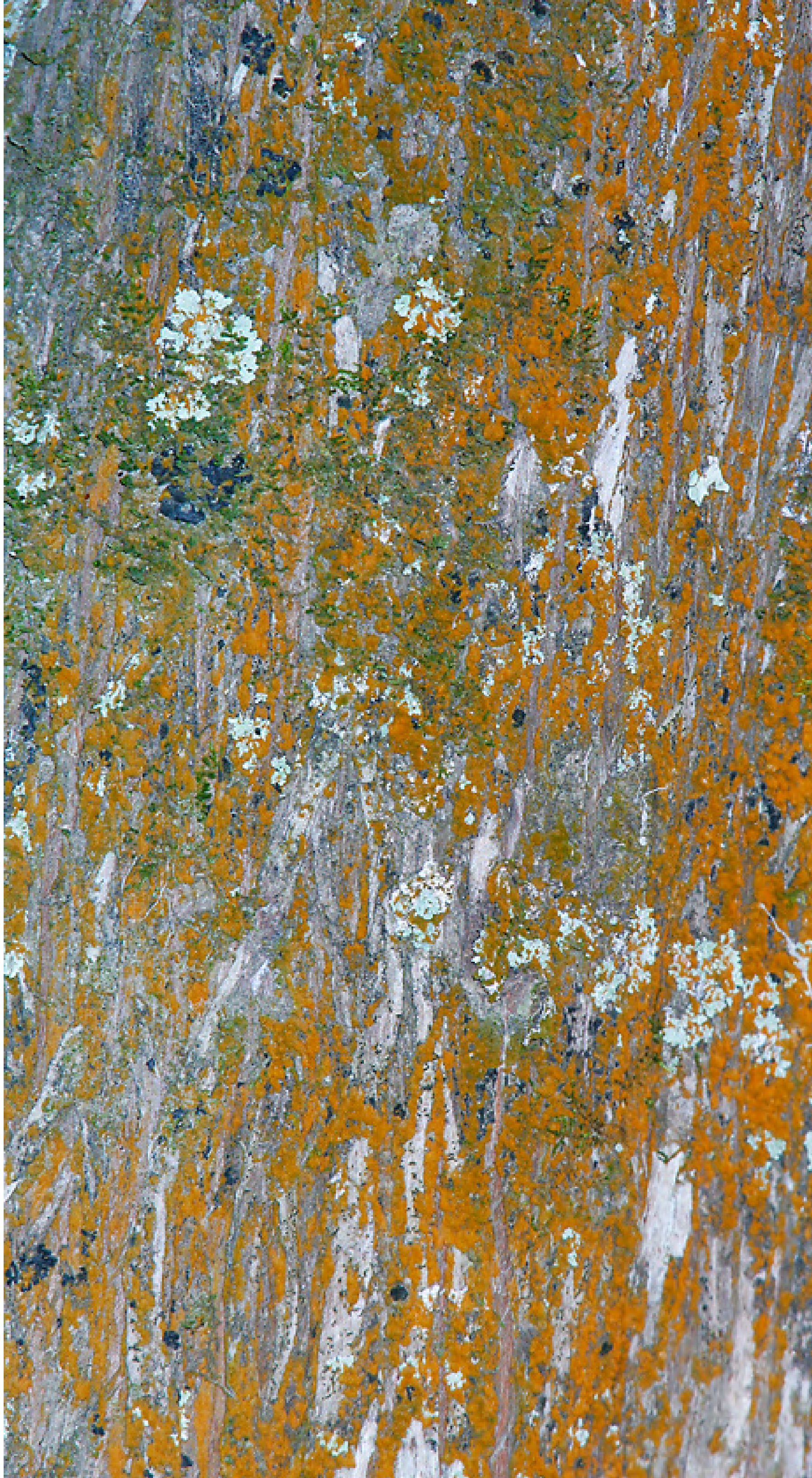
Canon 70-200mm f/2.8L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/160 sec. at f/11.

Here again, I chose a distinctive feature and placed it in a rule-of-thirds position. Note the figure-eight-shaped patch of snow in the upper left third. I chose my focal length so as to include the large section of packed snow in the upper right third.

lichens on cypress trunk
Lake Martin, LA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/160 sec. at f/8 set manually.

Once this section of the trunk caught my eye, I needed to add the 1.4X TC and move a bit closer in order to fill the frame with the pattern.



fall color on tundra, Denali National Park, AK

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/30 sec. at f/22.

Bored by the long distances that we traveled between animal sightings, I began making blurs from the moving tour bus.

Niagara Falls, Niagara Falls, Ontario, Canada

Canon 500mm f/4L IS with EOS-1Ds. ISO 50. Evaluative Metering +1 stop: 1/5 sec. at f/16.

After telling me that he had taken "all" the pictures of the falls, I showed this one to photographer/author Peter Burian. His reaction: "Oh my God!"

Chapter VIII

Bird Photography Hot Spots

Snow Geese
Fire in the Mist
Bosque Del Apache NWR
San Antonio, NM

Canon 600mm f/4 lens with EOS-1n. Fuji Velvia pushed one stop to ISO 100. Evaluative Metering +2/3 stop: 1/320 sec. at f/5.6.

This will be a familiar image to many of you. It is the only image in The Art of Bird Photography II *that appeared in the first book,* The Art of Bird Photography; The Complete Guide to Professional Field Techniques*. (Please see the explanation in the introductory text, this page.)*

As an aside, I was not in favor of the title of the first book because it offered sparse coverage of photographing birds from blinds and did not include anything on hummingbird photography with multiple flash setups. In retrospect, I would have been happier with the simpler The Art of Bird Photography *as the title of the first book. (*The Art of Bird Photography My Way *would have certainly been more accurate, if not a bit egotistical).*

Since the publication of the first book, I have been fortunate to learn of and visit some new spots that quickly won places in my heart, places that offer great potential for bird photography either during a given season, or, in rare cases, every day of the year. In this chapter I will share with you the basic information needed to visit each location, review the usual opportunities, make reference to the techniques that have proven effective there, and illustrate each of the hot spots with some of my favorite images. Site-specific galleries with additional images from Fort DeSoto, Lake Martin, Nome, and Galapagos may be found at the end of this chapter. (We currently offer site-specific photography guides for Bosque, San Diego, Fort DeSoto, Central Florida, and SW Florida and may be introducing several new guides in the future. See the home page at http://www.birdsasart.com/ for details.)

I chose to open this chapter with a photograph from the first book for several reasons. I like the crop here as it places the most prominent landing Snow Goose in the rule-of-thirds position. It reinforces the point that visiting the same spot over and over again can pay huge dividends. For years folks asked me, “How do you get the fire in the mist?” And for years I answered, “You go to Bosque a lot,” and that was both an honest answer and the best I could do at the time... Last year, when we encountered a bit of back-lit ground fog, I began to ask a few questions. I learned that the ideal conditions for creating ground fog occur when you have an extended period of warm weather followed by a big overnight drop in temperature. Knowing that is a great help: when you realize that conditions are good, you can make sure that you are in the right spot at the right time. The right spot would be a place where there is open water between you and the sunrise. The right time would be a half hour before sunrise. Lastly, the image was recently accorded a wonderful honor: it was selected as the cover photograph for *Light on Earth*. This book, published in November 2005, was produced by the BBC. Winning and honored images from the past twenty years of Wildlife Photographer of the Year competitions were considered for inclusion in the project. I was humbled by their choice. (You can order a signed copy off of our web site.)

Bird photographer at North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 28-135mm IS zoom lens (handheld at 30mm) and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/250 sec. at f/16.

Over the past few years, DeSoto has become one of my very favorite spots on the planet.

Fort DeSoto Park, St. Petersburg, FL

Fort De Soto, a Pinellas County park, is one of those rare places where you might encounter great bird photography on any given day of the year. My favorite season there is early spring when the Laughing Gulls and the Royal and Sandwich Terns, all in full breeding plumage, are performing a great variety of courtship and mating behaviors. The Reddish Egrets are also in spectacular breeding plumage in late March and April. Both the dark and the white phases (genetic morphs) of this species may be found at DeSoto with multiple individuals being present on some days. A handheld intermediate telephoto lens can be very effective when attempting to capture their dramatic drunken-sailor feeding-routines, routines that are designed to panic the baitfish that they are seeking. In April and May many of the wintering shorebirds are molting into their handsome breeding plumages before heading north. One or more Long-billed Curlews and up to several thousand shorebirds usually winter at DeSoto.

Reddish Egret
dark phase displaying
North Beach Lagoon
Fort DeSoto Park
St. Petersburg, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/640 sec. at f/5.6.

If you are working a Reddish Egret and you see another one flying in, both birds will often display when the incoming bird lands. When I saw this bird coming, I rotated the barrel to vertical, switched to 45-point AF, and made a series of images, all in a matter of seconds. This one was my very favorite.

Roseate Spoonbill feeding, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/2500 sec. at f/5.6.

You can often find spoonbills resting at dawn at North Beach. Occasionally, they hang around to feed for an hour or two. A quick check of the histogram showed that, with the soft early morning light, I did not need to underexpose in spite of the relatively dark green water.

The turnaround at East Beach (turn left at the big flagpole) is often good in the afternoon, especially at high tide. Photographing from your vehicle is a snap as you are permitted to drive on the grass there. At times, many shorebirds, terns, and large wading birds gather here. Groups of from six to twelve Great Egrets can often be found feeding at the east end of East Beach just before sunset. The lagoon at North Beach (turn right at the flagpole) is ***the*** premier photographic location in the park. This location can sparkle either in morning or afternoon, even on days when the park hosts several thousand beachgoers and picnickers. The higher tides are generally more productive. As with most coastal lagoons, a variety of gulls, terns, shorebirds, and the large wading birds (in addition to the specialty species mentioned above) may be found here; many are easily photographed. During various seasons, Roseate Spoonbills gather to roost at several North Beach locations; at times, they can be photographed at close range after a careful approach. Very early and very late in the day are generally best for this species, which usually departs as the beachgoers arrive.

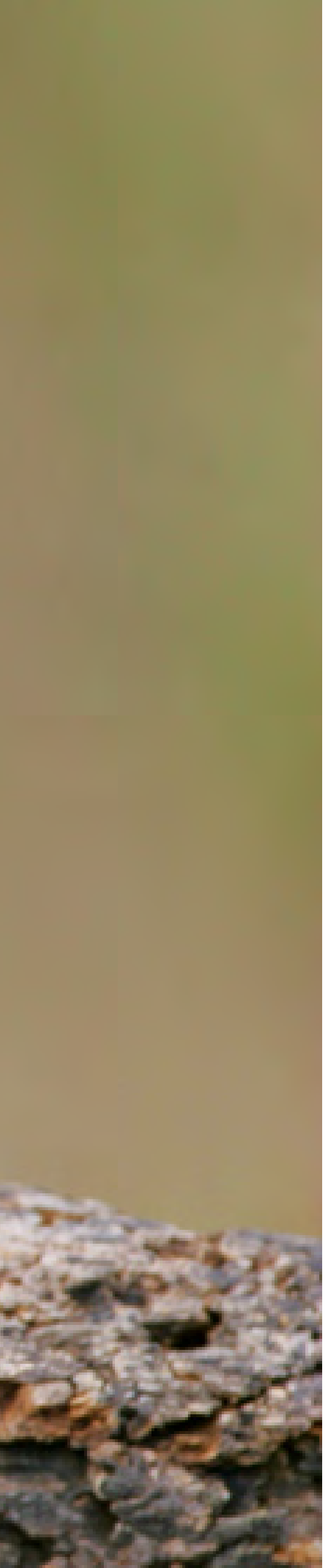
During spring and fall migration, a good selection of landbirds may be found, especially after storms. If you are really lucky, you might encounter a spectacular fallout of warblers, thrushes, tanagers, and grosbeaks in April, May, September, or October. The trees and brush in and around the picnic area at North Beach, the wooded trail east of the East Beach parking lot, and the mulberry trees and the fountain just east of the Bay Pier often attract and hold good numbers of spring and fall migrants (though you could not prove it by me…) For detailed information on photographing at DeSoto Park, do consider our DeSoto/Sarasota Site Guide:

http://www.birdsasart.com/siteguides.htm

Royal Terns, courtship feeding, Fort DeSoto Park, St. Petersburg, FL

Canon 400mm f/5.6L lens with EOS-1D Mark II. ISO 250. Evaluative Metering +2/3 stop: 1/1000 sec. at f/8 set manually.

The 400 f/5.6 lens is a great flight and action lens. With the Mark II, it yields an effective focal length of 520mm. I was working in Manual Mode. The sun ducked behind a cloud just as I raised the camera to make this image, so I slowed the shutter speed down two clicks, i.e., opened up 2/3rds of a stop, from 1/1600 to 1/1000 sec. My seat-of-the-pants guess was perfect.



Roma, Texas

I first met Roel Ramirez on a BIRDS AS ART Instructional Photo-Tour of Southwest Florida. He invited me to photograph from a blind that he had set up on his ranch in Roma, Texas. When I finally did visit, I was astounded. Though I have visited only during March and April, those visiting from November through May should be well rewarded with a good chance to photograph most of the Rio Grande Valley specialty bird species at close range in a comfortable, controlled setting. Summer is excellent as well, if you can stand the heat. Roel now has multiple blinds that offer both feeders and water features. Visiting photographers are free to set up perches to their liking or to adjust or reposition the existing ones so that each yields a beautiful, soft background from virtually every photography port.

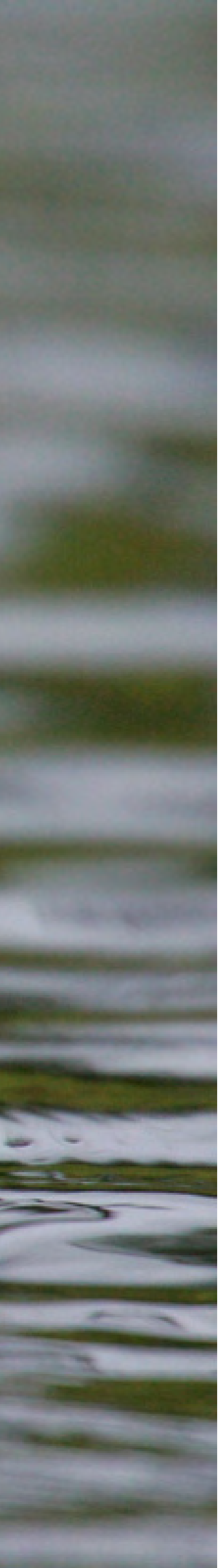
On my visits I have been able to make wonderful images of Green Jay, White-tipped Dove, Long-billed Thrasher, Golden-fronted Woodpecker, Black-crested (Mexican) Titmouse, Audubon's, Bullock's, Hooded, and Altamira Orioles, Orange-Crowned Warbler, Phyrrhuloxia, Northern Cardinal, Vermilion Flycatcher, Couch's Kingbird, Greater Kiskadee, Northern Mockingbird, Mourning Dove, Chachalaca, Green-tailed Towhee, and Olive, White-crowned, Clay-colored and Lincoln's Sparrows as well as some northbound migrant passerines such as Painted Bunting and Nashville Warbler. A colleague of mine who visited the blinds exposed more than a hundred rolls of film during his three-day visit.

Roel is now able to host visiting photographers only on a limited basis. If you are able to arrange a visit, you will be asked to sign a release (rattlesnakes are seen occasionally) and to bring a small bag of oranges and a small jar of peanut butter. Roel provides several varieties of seed. The halved oranges are placed on the perches and the peanut butter is spread sparingly on the back of selected logs and perches. Seed is placed in crevices in various logs. It is usually best not to spread seed on the ground. Roel reserves the right to place up to four photographers in the blinds on any given day. Photographers wishing to ensure that they have the blind to themselves will be required to pay the four-person rate. Interested photographers may contact Roel Ramirez in a variety of ways: by phone (cell: 956-607-0050, home/evenings: 956-664-2403); in writing: Roel Ramirez, 4820 North 3rd Street, McAllen, TX , 78504; or by e-mail: ramirezroma@aol.com. The Roma Inn (956-849-3755) is less than twenty minutes from Roel's ranch.

Long-billed Thrasher, Ramirez Ranch, Roma, TX

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 125. Evaluative Metering +1/3 stop: 1/640 sec. at f/4.

Most of the Rio Grande Valley specialty birds can be photographed on Roel's property, and, as Roel keeps building new blinds, each year is better than the last.



Santee Lakes, Santee, California

This site shines in winter when a variety of waterfowl can be photographed at close range. Many species (including Gadwall and Wood and Ring-necked Ducks) can usually be drawn into range rather easily by offering a variety of foods, with natural foods like whole corn being the most beneficial for the ducks. This county park opens at 8 a.m. during the week and at 6 a.m. on weekends. If you are able to enter the park in the pre-dawn hours, drive past the first four lakes (there are five in all), turn left at the campground entrance, and then left again. Scan the treetops across the lake to the east for roosting cormorants and park if you spot them. If you are at all lucky, you may get some good sunrise color against which to silhouette the birds and the bare tree skeletons. Even on clear mornings a bright yellow (or even bright white) eastern sky may serve the same purpose. In addition to the roosting cormorants, ducks flying into or out of the ponds may yield excellent silhouette opportunities as well.

left: Wood Duck hen, Santee Lakes, CA

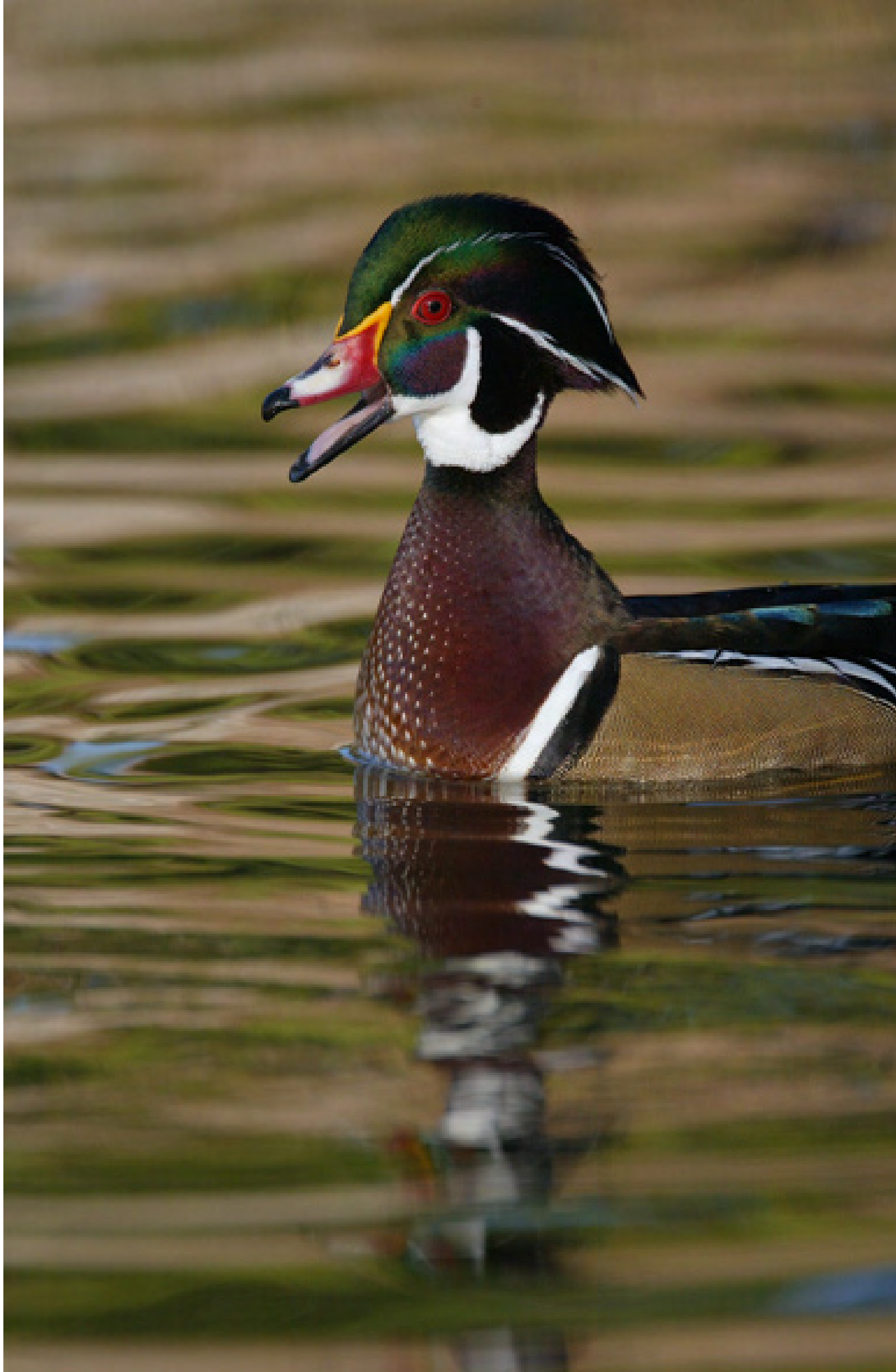
Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/400 sec. at f/5.6 set manually. Fill Flash with Better Beamer at -1 1/3 stops.

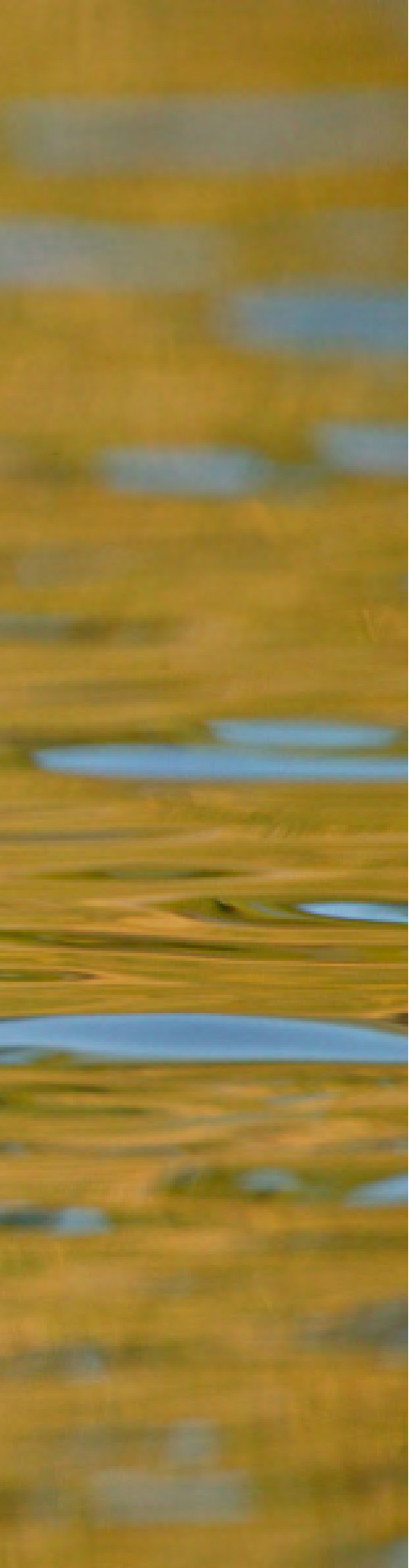
As far as I am concerned, Santee Lakes Park is the best wood duck spot on the planet.

right: Wood Duck drake, Santee Lakes, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 200. Evaluative Metering -1/3 stop: 1/800 sec. at f/5.6.

In most light, you need to make your drake Wood Duck images 1/3 stop darker than the meter suggests to keep from blowing out the white neck. In bright sun with dark backgrounds you might need -1 stop or more.





Other species that may be encountered and photographed at Santee include: Mallard, Lesser Scaup, American Wigeon, Redhead, Pied-billed Grebe, Great Blue Heron, Great and Snowy Egret, Black-crowned Night-Heron, Red-tailed Hawk, Brewer's Blackbird, and White Pelican (the latter in most winters). I have seen the great blues capture some huge fish here, but they have always been swallowed too quickly for my taste… As there are large numbers of human fishermen and picnickers at Santee, especially on the weekends, many of the birds are fairly tame. Though I prefer mornings here, afternoons can be productive as well, especially for the ducks. When looking for a good spot to feed the ducks, be aware of the background reflections and choose a spot with rich greens or yellows. Avoid spots with reflections of white or bright-toned areas or prominent tree trunks. If the birds are not responding well to whole corn, it often pays to purchase a few bags of the duck food from the park store (if it is open) as the ducks absolutely love the stuff. At times, you can do well at Santee by photographing from your vehicle, especially on the afternoon-light side, as the ponds are very close to the road there.

both:
Ring-necked Duck, drake, Santee Lakes, CA

facing page: Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 200. Evaluative Metering -1/3 stop: 1/200 sec. at f/5.6.

The ring-necks are not quite as tame as the woodies, but with a bit of patience, you can get some good chances on most winter days. When using the central sensor for ducks, I strive to place the AF sensor on the bird's neck (or back) to yield a pleasing composition.

above: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D. ISO 250. Evaluative Metering +1/3 stop: 1/160 sec. at f/8.

When a duck swimming towards you gets too large in the horizontal frame, rotate your rig to vertical and begin making front-end portraits.

Barred Owl, close-up of head, Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/8. Fill Flash with Better Beamer at -1 2/3 stops.

This free and wild bird was attracted by playing a CD with a series of Barred Owl calls. It is my belief that using a tape or CD judiciously to attract birds into photographic range will not have any negative effects on them.

Note: In mid-April, 2006, thousands of Great Egrets and Roseate Spoonbills abandoned their nests, many with eggs. The cause may have been human disturbance. It would be best to check on the status of the colony before visiting in the future.

Lake Martin, LA

Lake Martin, located about fifty miles west of Baton Rouge, Louisiana, is home to a rookery of thousands of pairs of herons and egrets, but most of the nests are difficult or impossible to photograph. The big attraction is the Roseate Spoonbill colony. The birds nest in the cypress trees that are just budding out in April when the spoonbills are building nests, performing various courtship rituals, and copulating; photographic opportunities are superb. Photographing the spoonbills on the nest gets more difficult each day as the foliage fills in, but on each of my last two visits there have been a few photographable nests. Best here for photographing individual birds or pairs at the nest are 500 and 600mm lenses (often with 2X teleconverters), but when the birds drop down to break branches from trees near the road or to pick up sticks from the swamp itself, opportunities exist as well for shorter effective focal lengths. Similar situations also exist for the Great Egrets that nest in the cypress swamp. Most of the nests hatch in May and June.

Other potential subjects here include both night-herons, Little Blue Heron (including the white immatures and the pied young-of-the-year), Snowy Egret, Cattle Egret, Barred Owl, families of introduced nutria, American alligators with young, and a wealth of macro subjects including flowers and dew-covered spider webs at dawn. Several species of songbirds, including Carolina Chickadee, Northern Parula, and Prothonotary Warbler nest in the swamp. Mornings are best on clear days but on cloudy days photography can be excellent throughout the day and working from the driver's seat of your vehicle can pay dividends at times, especially for the more wary species like Barred Owl.

Roseate Spoonbill pulling twig, Lake Martin, LA

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/1250 sec. at f/4 in Manual Mode.

At Lake Martin, the earlier in the season that you photograph, the less vegetation you have to deal with. With the subject parallel to the imaging sensor and the wings held back, 45-point AFPS worked perfectly for this image.

Wakodahatchee Wetlands, Florida

Wakodahatchee is derived from the Seminole Indian words for “created waters.” This 100 percent man-made wetlands is located in suburban Delray Beach, about an hour north of Miami. This spot offers great views of breeding Least Bitterns, Common Moorhens, and Purple Gallinules, all bird photography jewels. Fifty acres of unused utilities’ land has been transformed almost magically into a superbly functioning wetlands ecosystem. Every day, the Palm Beach County Water Utilities Department’s Southern Region Water Reclamation Facility pumps approximately two million gallons of treated water into the wetlands. By acting as a natural filter, the wetlands work to further cleanse the water.

Most of Florida’s regularly occurring water birds visit these lush wetlands at various times of the year and are easily photographed against rich green backgrounds; including lots of habitat in your images here can be a plus. Shorter lenses can be used here very effectively to create dramatic bird-scapes featuring the incredible vegetation. Great and Snowy Egrets are especially common in fall. On most days Anhingas and Tricolored Herons sit on boardwalk railings within arm’s length where they can easily be photographed with close focusing intermediate telephoto lenses. At times, the birds are so close that you may need an extension tube in order to be able to focus. Point-blank views of Green Heron are offered on most visits. From spring through fall Pied-billed Grebes are numerous; they breed occasionally at Wakodahatchee. Migrant Least Terns may be photographed as they dive for tiny fish in the shallow pools in spring. You will need a longer lens for the winter duck parade that is led by Blue-winged Teal. Yellow-rumped, Palm, and Yellow-throated Warblers forage in the wax myrtles in winter, but, like all warblers, they are difficult to photograph. Loggerhead Shrike is larger and slower and therefore a bit easier to photograph.

left: Least Bittern, grown chick
Wakodahatchee Wetlands
Delray Beach, FL

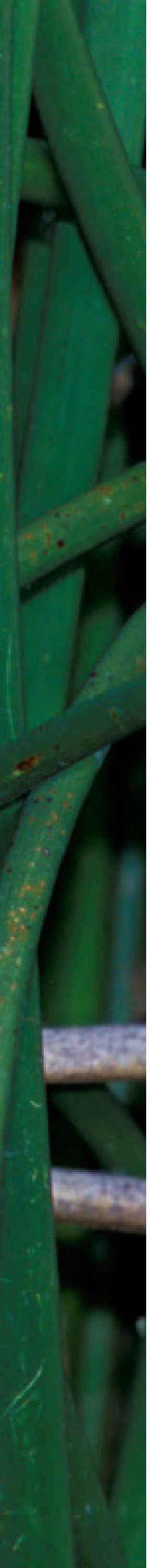
Canon 600mm f/4L IS lens with 25mm Extension Tube and EOS-1v. Fuji Provia F100 pushed 1 stop to EI 200. Evaluative Metering -1/3 stop: 1/320 sec. at f/6.7.

A birder told me that there were some big Least Bittern chicks sitting at eye level in the bulrushes a bit farther on down the boardwalk. I searched for a few minutes without success and was about to give up when I spotted this youngster almost close enough to touch!

right: Purple Gallinule on fireflag
Wakodahatchee Wetlands
Delray Beach, FL

Canon 600mm f/4L IS lens with EOS-1v. Fuji Velvia pushed one stop to EI 100. Evaluative Metering at zero: 1/640 sec. at f/5.0.

It is important to arrive at Wakodahatchee in the early morning hours not only to take advantage of the sweet light, but to avoid the hordes of joggers and walkers who begin arriving at about 8:30 am or so.



facing page:
Least Bittern chicks
Wakodahatchee Wetlands
Delray Beach, FL

Canon 600mm f/4L IS lens with EOS-1v. Fuji Provia F100 pushed 1 stop to EI 200. Evaluative Metering -1/3 stop: 1/180 sec. at f/8.

I chose f/8 in an effort to render all of the chicks relatively sharp. The trick with images like this is to be able to come up with four pretty decent head positions. As scanned film has big-time problems with contrast, it was necessary to use the Burn Tool to darken the bills and the lores of these cute little fluff balls.

This created wetland shines photographically during late spring and early summer when you may see as many as twenty Least Bitterns on a single loop of the boardwalk. In most years, there are one or two nests within yards of the boardwalk that are filled with downy young by early to mid-May. The surviving young Least Bitterns (large turtles claim many of the chicks) grow quickly. By mid-June, they may be photographed at eye level climbing about on the bulrushes. The Common Moorhens raise their broods on roughly the same time schedule, while the Purple Gallinules breed about two to six weeks later. Mottled Ducks also breed here and are commonly seen swimming about with their broods in tow. When photographing birds on the surface of the water from elevated boardwalks, one option that should always be considered is lowering your tripod and making your images by pointing your lens through the railing openings.

Moorhen broods tend to stay in shallow open water with the young swimming and feeding in close proximity to a lone adult. At times the young will crawl up on a log or mud bank to rest. In May, the Purple Gallinules can be photographed at eye level as they climb through the tall stands of fireflag eating purple blossoms as they go. In June, search the pickerelweed for adults with their tiny black chicks, but be sure to bring a long lens and your 2X teleconverter. There are still lots of immature Purple Gallinules trotting around in early fall. If you have a thing for cute chicks, or need a Least Bittern fix, you surely want to visit Wakodahatchee in late spring or early summer. Wakodahatchee is located in suburban Delray on the east side of Jog Road between Woolbright Road and Atlantic Avenue. From either I-95 or the Florida Turnpike you can take one of several exits (marked either Boynton Beach or Delray) and then consult your road map. Do note that the information above refers to the unit on the ***east side*** of Jog Road. A second unit opened recently on the west Jog Road but I have not had the opportunity to visit the new site yet. Wako is only about ten minutes by car from Loxahatchee National Wildlife Reserve.

Nome, AK

A visit to Nome on Alaska's Seward Peninsula can pay incredible photographic dividends. On my June 2003 trip, I photographed Gyrfalcon and Common Raven chicks in the nest at their cliff-side aeries, Willow and Rock Ptarmigan, Lapland Longspur, Parasitic Jaeger, and Bar-tailed Godwit on the tundra, Common Redpoll and Siberian Rubythroat (an extreme rarity) in dwarf willows, Arctic Tern, Mew Gull, and Black-legged Kittiwake in the air, Tundra Swans in a roadside pond in early morning light, Red-throated Loon and Long-tailed Duck in a coastal pond, and a host of nesting shorebirds including Dunlin, Western and Semipalmated Sandpipers, and Black-bellied and Pacific Golden-Plovers. Amazingly, upon seeing my Nome images, colleague Brian Small remarked that when he had visited Nome for twenty three days several years before he had photographed an entirely different cast of avian subjects. Nome is a place where—although you have to work for them—surprises are to be expected! Oops, I almost forgot Musk Ox.

On my second visit to Nome the following June we had an equally rewarding trip at times photographing well past midnight. We got to photograph many of the species noted above as well as many new species including: Aleutian Tern, Common Raven, American Golden-Plover, Orange-crowned and Yellow Warblers, Hermit Thrush, and White-crowned and Golden-crowned Sparrows among others. But most amazing was the fact that when we took our first tundra walk on June 11, we encountered and photographed several Western Sandpiper chicks. We saw shorebird chicks on most of our tundra walks, also getting to photograph the downy young of Dunlin and Semipalmated Sandpiper. On my first visit, we had seen only a single shorebird chick, a Western, and that near the very end of our visit.

facing page:
Semipalmated Sandpiper in beach pea, Nome, AK

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/8 in Program Mode. Fill Flash with Better Beamer at -1 1/3 stops.

Several pairs of Semi-Ps nest in the same gravelly area each year about nineteen miles out on Council Road.

Long-tailed jaeger in flight, Nome, AK

Canon 400mm f/5.6 lens with EOS-1D Mark II. ISO 200. Evaluative Metering at zero: 1/1600 sec. at f/5.6 set manually after checking histogram.

We got nothing on this species on my first visit but things changed in 2004.

Red-throated Loon, Nome, AK

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D. ISO 400. Evaluative Metering +1 stop: 1/640 sec. at f/8.

On cloudy days, still water becomes a very light blue. In such conditions it is necessary to add at least a stop of light to come up with a good exposure. When using the 2X with an f/4 lens, I will often place the central sensor on the bird's neck, cropping to a more pleasing composition if need be.

The roads in Nome are excellent. Teller Road winds north and west from town for 72 miles, Kougarok Road north and east for 85 miles, and Council Road east and then northeast for 75 miles. Each provides access to varied habitats, wildlife, stark scenics, rushing streams, meandering rivers and snippets of Gold Rush history. The only North American breeding site for Bristle-thighed Curlew is atop the ridge at Coffee Dome at mile 72 on the Kougarok Road. I can tell you from personal experience that the hike, which is often described as walking on bowling balls on top of bedsprings, is a killer. Four of us walked more than three miles up and down this soft, tussock-covered tundra ridge, all with tripod-mounted 600mm f/4L IS lenses. We saw no sign of the bird at all and several of us wound up somewhat crippled for a week or more.

The Aurora Inn is ***the*** place to stay in Nome, and because the local restaurants (except for Twin Dragon) leave a lot to be desired, you may wish to rent one of the rooms that comes equipped with a full kitchen. (All of the rooms have small fridges and microwave ovens.) In addition, Aurora Inn offers a fleet of rental vehicles that includes a variety of SUVs and vans, most in good to excellent working order.

Siberian Rubythroat singing, Nome, AK

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D. ISO 250. Evaluative Metering +1/3 stop: 1/1000 sec. at f/8.

This bird, extremely rare anywhere in North America, is seen on average in Nome only two to three times a decade. We recorded the bird's song and played it back. After ignoring the tape for a while, he popped up right in front of the group and began to sing!

Shark Valley, Everglades National Park, FL

An early morning visit to Shark Valley in mid- to late winter is almost always productive, and at times the number of birds present borders on the unbelievable. And Shark is a great place to learn to avoid clutter as there are lots of sticks and dead branches and bushes in the water and along the shorelines. The slough and the pools will all be on your right—to the west—as you enter, making this pretty much of a morning-only location. This unit of Everglades National Park is located on Route 41 as it traverses the state east/west. Unfortunately, it opens at either 8:30 or 9:00 a.m. (depending on the time of year). Walk-in entry is permitted but parking during the early morning hours is problematic and the regulations as to where and when you can park seem to change from visit to visit. Worst of all, to avoid being ticketed, you need to leave the park on foot (this is a good walk) and then move your car to the parking lot when the park opens. It pays to call the day before and ask "If I enter the park early on foot, where should I park to avoid being ticketed?" If they tell you, ask them if it is necessary for you to re-park your car when the park opens.

Why go through all this bother? In the slough and its related pools you will usually find all manner of wading birds posing and fishing at close range. Expected species include Anhinga, Purple Gallinule, Common Moorhen, White Ibis, Great, and Snowy Egrets, Great Blue, Little Blue, Tricolored, and Green Herons, Wood Stork, and both night-herons—especially adult Black-crowneds in some years. Resist the urge to stop at the pools closest to the road as these are terribly cluttered. By continuing on, you will find subjects on relatively cleaner perches in early morning light. Once you pass the pay booth, conditions really begin to improve, and once you make it past the parking lot, you will most likely encounter your best opportunities. In the first one hundred fifty yards of slough beyond the aforementioned pay booth, I have found more than a dozen adult Black-crowned Night-Herons and more than two dozen Green Herons in a single morning.

When water levels are fairly low, large numbers of wading birds fish in the sloughs, and it is not uncommon to see several large fish caught in a single morning by the great blues and the Great Egrets. Double-crested Cormorants often fish successfully near the deck that surrounds the souvenir shop, with catfish being their primary prey. With gentle east winds in the morning, flight photography can be pretty darned good as many of the birds land on the taller perches along the slough. Turkey Vultures and Red-shouldered Hawks often perch fairly close to the paved path.

Purple Gallinule, Shark Valley Everglades National Park, FL

Canon 600mm f/4L IS lens with EOS-1v. Fuji Velvia pushed one stop to EI 100. Evaluative Metering at zero in early morning light: 1/250 sec. at f/5.6.

With all of the action on the west side of the path, Shark Valley is a morning spot. The earlier that you arrive, the better.

Wilson’s Warbler, Magee Marsh, OH

Canon 600mm f/4L IS lens with 1.4X TC ad EOS-1v. Fuji Provia F100 pushed 1 stop to EI 200. Evaluative Metering -1/3 stop: 1/250 sec. at f/8.

I was sure that this was a perfect image so I had the roll processed 1/3 stop darker (pull processed) to ensure that I did not burn the yellows.

Magee Marsh, OH

In very late April and during most of May the boardwalk and the parking lot at Magee Marsh, located twenty miles east of Toledo, may offer opportunities to photograph northbound migrants, but such opportunities are strictly dependent on weather and luck! I have heard numerous theories as to the precise weather patterns needed to ensure a wave day (when dozens of warblers, gnatcatchers, vireos, tanagers, thrushes, and grosbeaks will be flitting about at eye level) but nothing is ever guaranteed. Your best bet is to stay at least a week and hope that you hit it right. My luck there from 1998 through 2002 was abominable. The worst came in 2002. The day after I left, ten visiting and local photographers led by IPT-veteran and good buddy Brian Zwiebel experienced an incredible fallout; Brian exposed more than thirty rolls of songbird images that day, mostly warblers. During that same time frame, I had similar bad luck both at Pt. Pelee and at Tawas Point, Michigan, often hearing upon arrival the dreaded "You should have been here yesterday!" or learning later that "You should have stayed another day!" Such is the fate of the warbler photographer…

American Woodcock with chick
Magee Marsh, OH

Canon 600mm f/4L IS lens with 1.4X TC and EOS-1v. Fuji Provia F100 pushed one stop to EI 200. Evaluative Metering at zero: 1/180 sec. at f/6.7. Fill Flash at -1 stop with Better Beamer.

When I made this image, I was so excited that I did not even see the chick. If I had, I would--of course--have pointed the camera a bit to the right so as to have included all of the chick in the frame.

Fortunately there are some reliable back-up subjects at Magee Marsh and at the adjacent Crane Creek State Park. In most years a pair of American Woodcocks nest on the edge of the woods next to the picnic area near the parking lot. Tree Swallows used to nest in the boxes along the causeway canals; we would affix a natural perch to the box and the birds would generally take to it within minutes. This was an afternoon opportunity. The boxes were removed in 2003 during a dredging project, but the technique described above should work wherever Tree Swallows utilize nest boxes. Canada Geese and their goslings frequent many areas of the state park, especially the parking lot near the visitor center and the grassy edges of the aforementioned causeway. I love photographing them from the car on rainy days (of which you will encounter more than a few during early spring in Ohio.) Killdeer and their young may be found in the parking lots or the grassy fields but you must stay in your car to have a chance with them. I had an adult peacefully brooding four chicks right outside my car when two other photographers drove in behind me and got out of their vehicle in an attempt to get closer. They did, of course, succeed only in flushing the birds…

Magee Marsh is located off Route 2 about fifteen miles west of Oregon, Ohio. Early risers may wish to try for sunrise silhouettes at nearby Ottawa National Wildlife Refuge; the entrance is just west of the entrance to Crane Creek State Park. When the water levels are just right at Ottawa, large numbers of Great and Snowy Egrets and Great Blue Herons can be found fishing in the impoundments (which lie east of the refuge road). This is also a good spot to photograph baby geese and singing Red-winged Blackbirds. Again, using your car-as-blind is mandatory here. On wave days, check out the small woodlands at Metzger's Marsh. Both Brian Zwiebel and Robert Royce, another IPT veteran, friend, and skilled bird photographer have "killed" at this location (though again, you could not prove it by me!) To reach Metzger's, head west on S.R. 2 and turn right (north) onto Bono-Port Clinton Road, follow it as it winds its way to a small parking lot. Some folks like to use a super-telephoto lens with either a 1.4 or 2X teleconverter for warblers, while others prefer an intermediate handholdable telephoto with a 1.4X TC. Though hungry migrants can be totally tame and the quarters are often close, I have always gone with big glass for warblers.

American Woodcock chick
Magee Marsh, OH

Canon 600mm f/4L lens with 2X TC and EOS-1v. Fuji Provia F100 pushed one stop to EI 200. Evaluative Metering at zero: 1/125 sec. at f/8. Fill Flash at -1 stop with Better Beamer.

At times in bird photography you have only a second or two to create an image. That was the case here when this little guy, who had been totally hidden in the tall grasses, climbed up on a small chunk of wood for an instant. One-shot AF saved the day and the Fill Flash contributed to the success of the image.

Galapagos Islands, Ecuador

I visited Galapagos for the first time in July, 2005. I remember coming ashore at Suarez Point on Hood Island that first afternoon and being totally stunned. Though I knew that the Waved Albatross colony was only a fifteen minute walk from the dock, the profusion of bird life was so incredible that we only made it a few hundred yards along the path during our three-hour stay. Hood Mockingbirds greeted us as soon as we got off the Zodiacs, as did a Galapagos Hawk. There were Blue-footed Boobies nesting everywhere, even right on the paths, underfoot. A bit farther on I encountered my first Swallow-tailed Gulls and Nazca (formerly Masked) Boobies. A subspecies of our Yellow Warbler, the males with bright rufous caps, flitted about in the bushes and at our feet. Miraculously, our guide was able to contact the park service by satellite phone and arrange a full-day return visit to Hood for us. On our second try, we did make it to the Albatross colony.

Tower Island was equally stupendous for birds. On our morning there we photographed Lava and Swallow-tailed Gulls, Great Frigatebirds with chicks, Blue-footed Boobies, and both light and dark-phase Red-footed Boobies. We had some gorgeous light late that afternoon as we were blessed with courting Nazca Boobies and a Short-eared Owl. And on our way back to the Zodiacs we got to photograph Red-footed Boobies with chicks along the path and Noddy Terns at the bottom of the steep rock staircase.

On North Seymour Island we had some great early morning flight photography with Magnificent Frigatebirds, and as it clouded over we got to make images of both Magnificent and Great Frigatebirds on their nests, the latter species with chicks. At South Plaza Island we had more excellent flight photography with both Swallow-tailed Gull and Red-billed Tropicbird. At Point Espinoza on Fernandina Island, far to the west, the avian stars were the Flightless Cormorants building their nests with mouthfuls of seaweed.

In addition to all the wonderful bird photography we had great opportunities with both Marine and Land Iguanas, Sally Lightfoot Crab, California Sea Lion, Chilean Fur Seal, Pacific Green Turtle, and, of course, with the famed Galapagos Tortoises.

Magnificent Frigatebird, North Seymour Island, Galapagos

Canon 500mm f/4L IS lens with 25mm Extension Tube and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/125 sec. at f/8.

We had only one photographable magnificent with its pouch inflated...

Feet and eggs of Blue-footed Booby, Hood Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens (handheld at 141mm) with EOS-1D Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/100 sec. at f/8.

Most of the birds had no fear of humans. This bird's nest was in the middle of the main path...

East Africa

When folks think of Kenya and Tanzania, they think of photographing elephants and giraffes and big cats and antelopes and hippos and rhinos, but in fact, East Africa offers some of the finest bird photography on the planet, much of which is done from the open roof hatch of a safari van. Getting within range of the larger birds, such as ostriches, bustards, Secretary Bird, ground hornbills, guinea fowl, pelicans, herons, egrets, storks, flamingoes, hawks, eagles, and vultures is relatively easy. Getting close to the smaller species, especially the landbirds is exceedingly difficult and requires great teamwork between the van leader and the driver-guide.

Additionally, there are many more opportunities to photograph both land and water bird species on the grounds of the various lodges, clubs, and hotels. On our photo-safaris Todd and I often program a half- or full-day of grounds photography at suitable locations. Many of the lodges have informal bird feeding programs and most are fine when visiting photographers wish to set up perches or move feeders around to improve the photographic conditions. I can think of more than a few locations where you can make some great images of African birds while enjoying either your lunch or a drink at the bar.

At some locations, you can photograph a variety of birds from boats provided by the lodges. Most of the boat drivers are incredibly skilled at spotting the birds, at getting the boat in perfect position for photography, and at keeping the craft still. Photographing birds from a boat is certainly a huge challenge, but the results can be incredibly rewarding.

Blue-naped Mousebird, Island Camp, Lake Baringo, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/125 sec. at f/5.6. Fill Flash at -2 stops with Better Beamer.

We set up a feeder at the bar, put some perches in place, and had a great afternoon.

Saddle-billed Stork, juvenile playing with grass, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/4. Fill Flash at -1 stop with Better Beamer.

We drove right up to this young saddle-billed after watching it fly into the marsh. 45-Point AFPS performed superbly.

this page: African Fish Eagle
Lake Baringo, Kenya

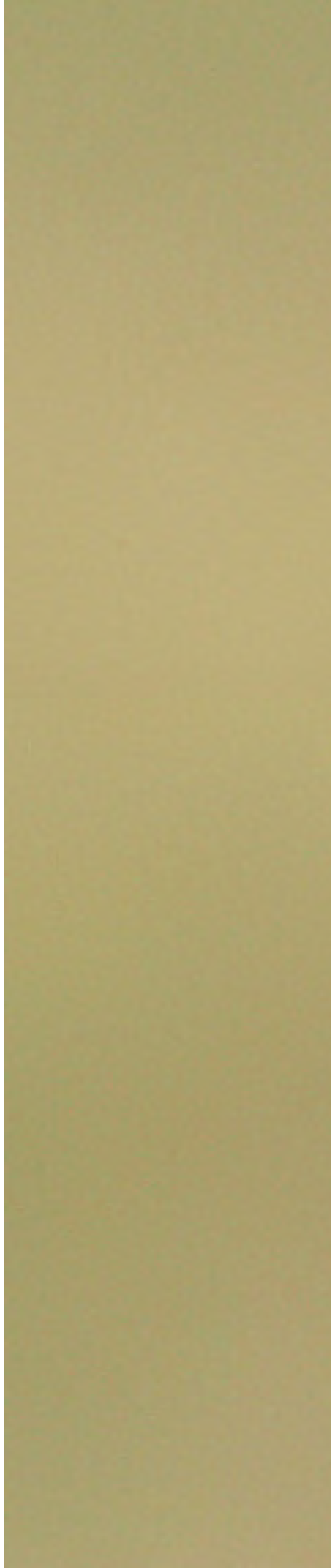
Canon 70-200mm f/2.8L IS zoom lens with 1.4X II TC (handheld at 235mm) and EOS-1D Mark II. ISO 250. Evaluative Metering +1 stop: 1/800 sec. at f/5.6.

Four of us photographed this fish eagle from a large watercraft. The boat driver had a bucket of fresh fish with small pieces of a light, balsa-like wood sewn into their bellies. A loud whistle and a tossed fish would bring the hungry eagles right to the boat. This image is a vertical crop of a horizontal original.

facing page:
Yellow-throated Longclaw
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/11.

There were two longclaws perched rather cleanly atop a bush just off the road. We decided to try for them, realizing that the odds against getting close with three photographers in the van were slim at best. One flew off as we approached. One did not... Without perfect communication between the van leader and the driver guide we would never have succeeded...



Great Egret chicks in nest, St. Augustine Alligator Farm, St. Augustine, FL

Canon 70-200mm IS L lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/800 sec. at f/4. Fill Flash at -1 stop.

For years I had been trying to create an image that showed the pink feather shafts and the greenish underwing skin of large egret chicks...

St. Augustine Alligator Farm, St. Augustine, Florida

Imagine a heron and egret rookery where both adult Cattle Egrets in dazzling breeding plumage and Snowy Egret chicks covered in down are close enough to touch. Where nests filled with fluffy white Great Egret young can be viewed below eye level. Where unfledged Tricolored Herons strut about on the boardwalk railings. You are not dreaming; you are visiting the St. Augustine Alligator Farm in St. Augustine, Florida, about an hour south of Jacksonville and a bit less of a drive north from Daytona Beach.

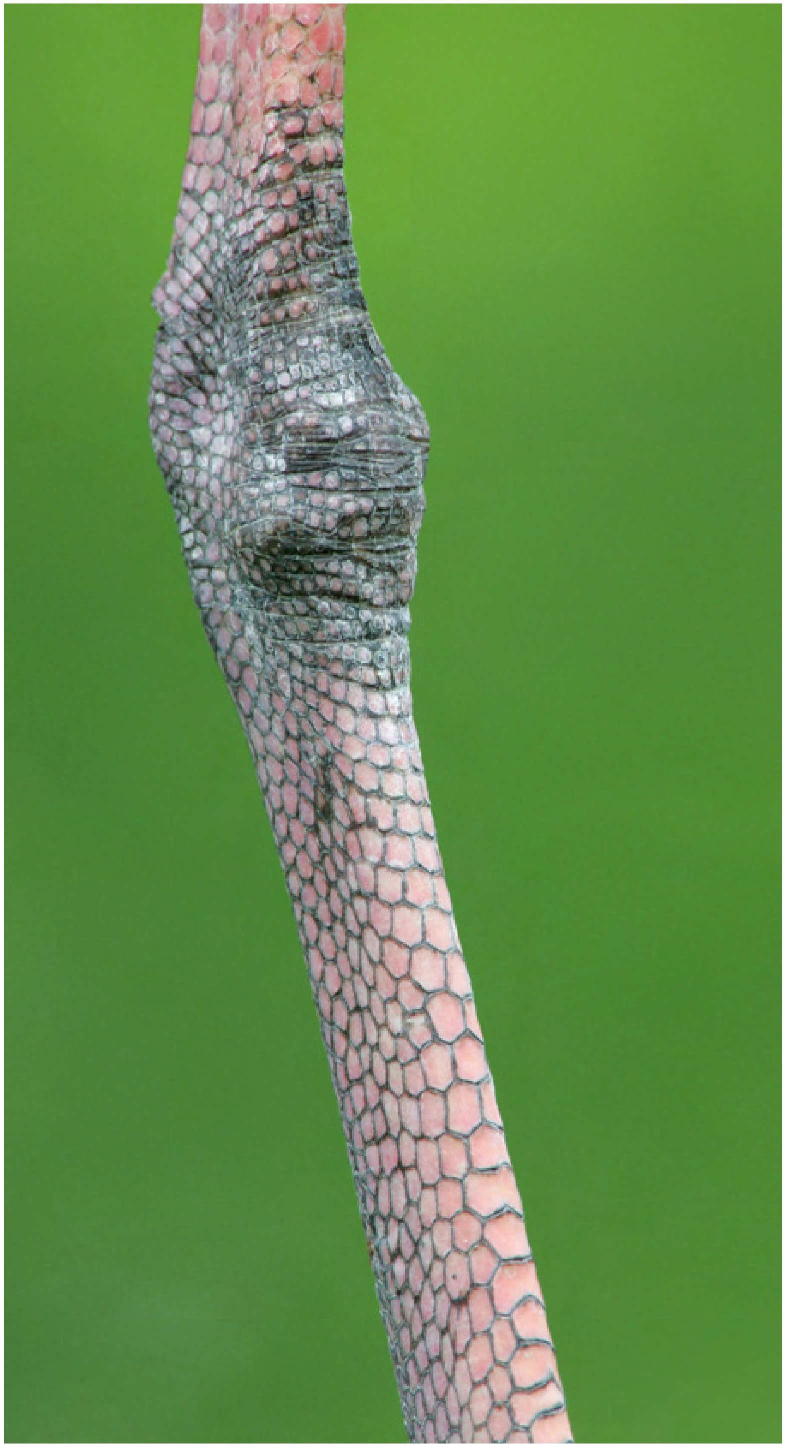
Tens of thousands of tourists visit this attraction annually and more and more photographers are visiting this amazing place each year. Though the large reptiles will instantly polish off any young heron that falls into the moat, the success of the rookery is tied directly to the presence of the gators, which, to put it mildly, deter ground predators like raccoons and feral cats. Though the habitat seems identical, not a single heron or egret nest is to be found outside the farm fences.

Several hundred pairs of tall wading birds nest successfully at St. Augustine each year. Over the course of many decades, Cattle Egrets made their way (via South America) from Africa to North America. In recent years, they have out-competed both Snowy Egret and Little Blue Heron at this and other locations and at the Alligator Farm, Cattle Egret has now replaced Snowy Egret as the predominant breeding species. Tricolored Heron, never an abundant breeder at the farm, seems to be holding its own. Not affected by the invaders are Great Egrets, which occupy a different microhabitat, nesting mostly (but not exclusively) in the taller oaks at the far end of the boardwalk. In recent years more and more Wood Storks have successfully raised young in nests at the top of the huge oak at the corner of the swamp boardwalk. A few Roseate Spoonbills almost always fly in to join hundreds of White Ibises in a large evening roost.

Visit St. Augustine in April or May to photograph adult birds at point-blank range in spectacular breeding plumage. Birds actively involved in breeding have increased hormonal flows that cause the soft parts (bills, lores, legs, and feet) to intensify in color. Some species grow a variety of breeding plumes in response to the increased hormonal levels. Great Egrets sport bright lime-green lores and long, lacy plumes on their backs. The bills of Cattle Egrets have cherry-red tips while their lores become bright magenta. Both Tricolored and Little Blue Herons feature bright ultramarine-blue bills, with the former species exhibiting ruby-red eyes. The Snowy's lores become a bright cherry red and their usually diagnostic yellow feet take on a fairly bright reddish tinge as well.

By late April in most years, several Great Egret nests have young. The Snowy Egret nests begin to hatch in May. By late June or early July there are hundreds of chicks and young of all sizes in nests—sometimes as close as a foot from the boardwalk. Young Cattle Egrets with their thick, black bills and squarish foreheads squabble over food with nest mates, raising their crests to proclaim themselves #1. Newly fledged Snowy Egrets feature pink bills and yellowish green legs, while Great Egret chicks have bills as yellow-orange as those of their parents. The tiny Tricolored Heron chicks are, well, just plain ugly. When a Tricolored parent returns to the nest after fishing, all heck breaks loose. The hungry young birds grab recklessly at their parent's bill in an effort to get the adult to regurgitate fish; scenes like that are repeated in countless nests throughout the season.

I love to visit St. Augustine in the early morning hours and work the nests in the shade, and then return late in the day to take advantage of the late afternoon light. The folks at the Alligator Farm are very much photographer-friendly. They offer an annual photo pass that allows photographers early entry from March 12 through July 17. You can find details on the Alligator Farm web site (www.alligatorfarm.com) by clicking on Visitor Information/Annual Passes/Photo Pass. On most evenings you will be able to stay later than the listed closing time by offering the keeper a $5 per person gratuity. Do note that this is not official Alligator Farm policy but rather an informal practice (that I began several years ago). As there are virtually no mosquitoes at the Alligator Farm and you do not need a canoe to visit, the photographic rewards of visiting this unique, easily accessible rookery are great.



left: Roseate Spoonbill, close-up of leg showing scute detail
St. Augustine Alligator Farm, St. Augustine, FL

Canon 500mm f/4L IS lens with 2X II TC, 25mm Extension Tube, and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/11. Fill Flash with Better Beamer at -1 2/3 stops.

At my suggestion, the folks at the Farm "planted" a large tree near the boardwalk. Lots of birds, adults and young alike, took to the new perch right off the bat.

left:
Snowy Egret
in flight
St. Augustine
Alligator Farm,
St. Augustine, FL

Canon 100-400mm L IS ens (handheld at 310mm) with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/1000 sec. at f/8 set manually. Fill Flash with Better Beamer at -1 stop.

Flight photography at the Alligator Farm can be superb in all types of weather. A handholdable zoom lens is ideal as the birds often fly by at close range.

above: Little Blue Heron chicks on branch, St. Augustine Alligator Farm, St. Augustine, FL

Canon 500mm f/4L IS lens with 25mm Extension Tube and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/80 sec. at f/5.6. Fill Flash with Better Beamer at -1 1/3 stops.

In most years, the nests of this species are buried in deep vegetation far from the boardwalk, but in 2005 there were several sets of little blue chicks posing in the open just yards from the boardwalk. Heron and egret rookeries are great places to learn to deal with background clutter and whitewash. It is best to check all of the angles and to choose your perspective carefully.

Fort DeSoto

Gallery

Roseate Spoonbill resting in early morning, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/250 sec. at f/16.

Here I used One-Shot AF (with the central sensor only by necessity with the 2X), focused on the bird's eye, and recomposed. By getting down on one knee I was able to stop down to f/16 without bringing up too much background detail. Cloudy-bright days are great for digital photographers as they yield rich colors without undue contrast.

American Oystercatcher in early morning light, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/500 sec. at f/11.

You need to approach most of DeSoto's oystercatchers with care as they are usually not as tame as those at Little Estero Lagoon. A check of the histogram indicated that I needed to underexpose a third to avoid burning the bird's white breast in spite of the soft light. Why? The large areas of black feathering, all near the center of the metering pattern, had a great effect on the meter reading.

Mixed tern flock taking flight, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering +1 stop: 1/30 sec. at f/32 in Tv mode.

As the terns were taking off parallel to the imaging sensor, I used ***One-Shot AF*** *with the central sensor so that losing focus in the soft light would not be an issue. Large mixed species tern flocks may be found at DeSoto in early fall. The flocks often take flight every few minutes for no apparent reason. Note that I used Tv mode to allow for total control of shutter speed when making intentional blurs.*

left:
Laughing Gulls courting
North Beach Lagoon
Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/640 sec. at f/8.

Love is in the air at DeSoto in late March as the locally breeding gulls and terns perform their age-old courtship rituals. The male Laughing Gulls strut around the females calling incessantly while tossing their heads back. Eventually the female rubs her mate's neck with hers inducing him to lovingly vomit up some fish chunks for her.

right:
Royal Terns, pre-copulatory stand
North Beach Lagoon
Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/1000 sec. at f/11.

Bright whites against middle/dark blues on clear days usually call for a 1/3rd stop underexposure. The male tern is practicing keeping his balance atop the female.

left: Least Sandpipers in winter plumage
North Beach Lagoon
Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/640 sec. at f/11.

Here again I used One-Shot AF (with the central sensor only by necessity with the 2X), focused on the front bird's eye, and recomposed. These guys were actively feeding when a small plane buzzed the lagoon bringing the birds briefly to attention.

right: Snowy Egret flight fishing
North Beach Lagoon
Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/3200 sec. at f/8.

Here again, 45-Point AF worked to perfection.

Red tide is a harmful algal bloom, a rapid growth of microscopic single-celled plants that live in the sea. Most blooms are harmless, but unfortunately, a small number of species produce potent neurotoxins that can make their way up the food chain and affect and even kill higher forms of life. When there are red-tide conditions at DeSoto, tens of thousands of fish are often killed creating a smorgasbord for many types of birds. This snowy was feeding on fish weakened or killed by a harmful algal bloom. With really bad red tides there may be neurotoxins in the air that can cause humans to experience various forms of respiratory distress and/or skin irritations. At times the neurotoxins are so strong that staying at the beach is not an option.

Reddish Egret with baitfish, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/800 sec. at f/4.

Here, 45-Point AFPS yielded a sharp image on the first frame and then, with the low contrast, lost focus on the next two images in the series...

Black-bellied Plover, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/800 sec. at f/10.

Though this bird was sick and possibly dying, it made a great subject. I struck up a conversation regarding the bird with a woman I met on the beach; she wound up taking the bird to the park office in hopes of getting it to an avian rehabilitator.

Short-billed Dowitcher
flapping at dawn
North Beach Lagoon
Fort DeSoto Park
St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/1000 sec. at f/11.

To make this image it was necessary to focus manually as AF has a tough time when trying to focus in extreme backlit situations. To reach the spot that I call the Gulf Spit, cross the wooden foot bridge at North Beach and bear right all the way around the lagoon (while angling toward the Gulf) until you reach the spit. There are usually lots of birds in this area, especially at high tide.

Shorebird flock in flight in marsh, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 28-135mm IS zoom lens (handheld at 65mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/13 sec. at f/20.

I was frustrated because the birds were flying right around me, much too close to photograph with the 500 lens. I had left my 70-200 in my SUV. Then I realized that I had the 28-135mm lens in my vest pocket; it turned out to be the perfect tool for the job. I just love the painterly look of this one.

left: Reddish Egret, white phase
North Beach Lagoon, Ft. DeSoto Park
St. Petersburg, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering +2/3 stop: 1/500 sec. at f/4 in Manual Mode.

White phase Reddish Egrets are exceedingly beautiful and elegant birds. The soft light and the marsh grasses add to the peaceful mood of this image.

right: Tricolored Heron
in mega-breeding plumage
North Beach Lagoon, Ft. DeSoto Park
St. Petersburg, FL

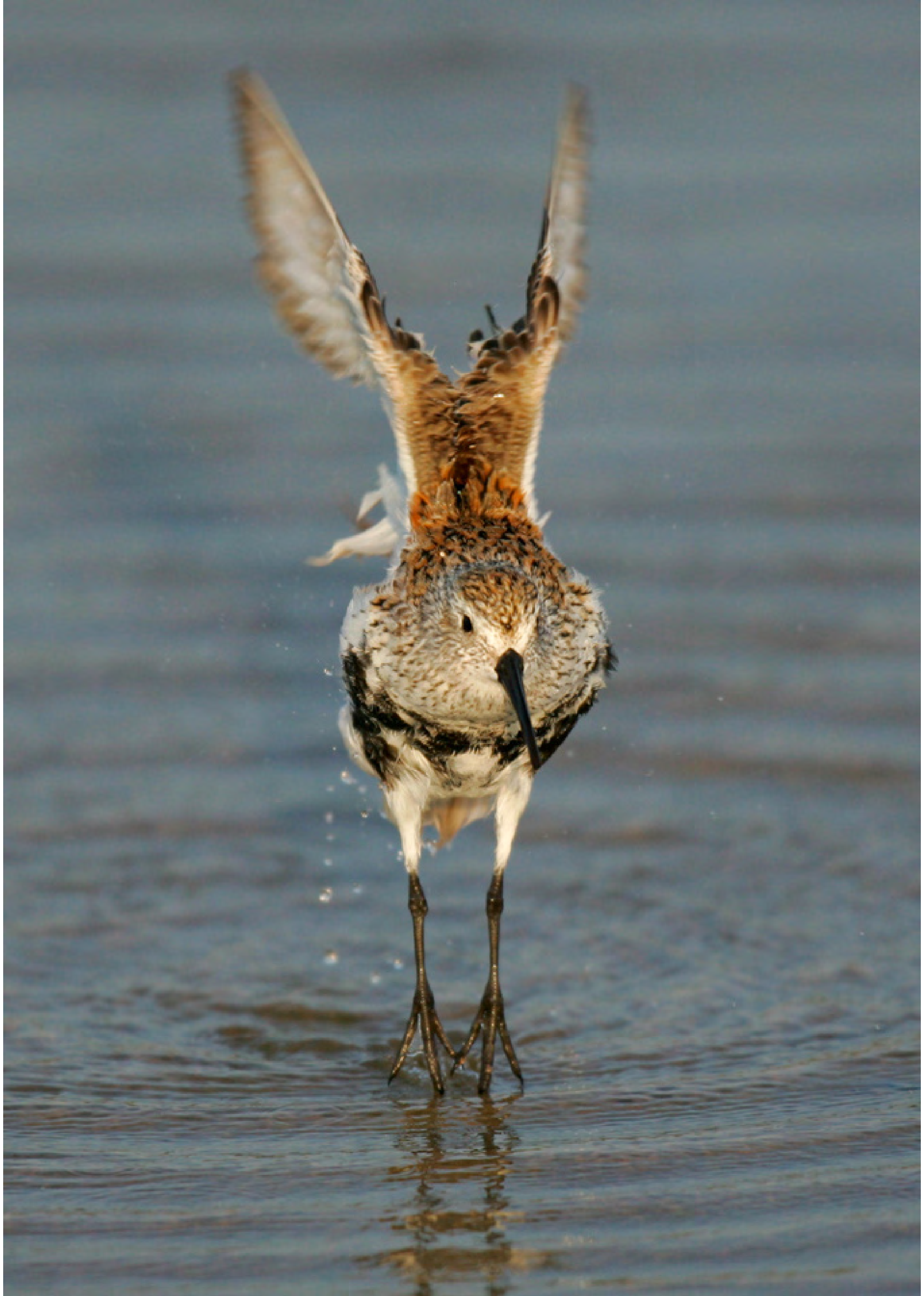
Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/2500 sec. at f/5.6.

Many of DeSoto's wading birds are in full and spectacular breeding plumage in March and April. The soft parts' colors are brightened due to the increased hormonal flow that occurs when herons and egrets are actively engaged in breeding.

Long-billed Curlew, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/1600 sec. at f/8.

This species can be very tame at DeSoto. I knelt down while making this image to move the background effectively farther from the subject.



Dunlin, breeding plumage
flapping after bath
North Beach Lagoon, Fort DeSoto Park
St. Petersburg, FL

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/2500 sec. at f/4.

I struggled for years to figure out the best way to photograph the after-bath flaps of shorebirds. Here is what I have come up with:
1. Take off your teleconverter and work wider than usual.
2. Focus using one of the following methods:
a) After setting a high ISO and a relatively small aperture, select One-Shot AF with the central sensor only. Focus on the bird's head as it dips it under water to bathe. Refocus if the bird moves relative to your position. When the bird jumps up to flap, push and hold the shutter-button.
b) Select 45-point AF in AI Servo Mode. Focus manually on the bird as it bathes. When the bird jumps, acquire AF by depressing the shutter button and then attempt to follow the bird as it jumps while keeping the shutter button depressed. (I used "b" to create this image, which was cropped from a horizontal original.)

Common Tern, winter plumage, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 800. Evaluative Metering +1 stop: 1/250 sec. at f/8 in Manual Mode.

As a general rule, birds are more wary on bright sunny days than on cloudy days, perhaps because human form and movement are more distinctly defined by shadows. I had not been able to get within one hundred yards of a single tern one sunny Monday, but on Tuesday when it was cloudy getting close was much easier.

Sanderlings, winter plumage, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC (on Panning Ground Pod) with EOS-1D Mark II. ISO 400. Eval. Metering -1/3 stop: 1/400 sec. at f/16.

I love working birds on glistening, wave-washed wet sand while I am flat on my belly, especially in early morning light...

Sandwich Tern, breeding plumage in flight, North Beach Lagoon, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/2500 sec. at f/8 in Manual Mode.

When the wind and sun are roughly together, find a flock of terns roosting, note how and where the incoming birds are landing, and then put yourself in position to make some good flight photographs. You can get close while seated with a 300 or 400mm lens or stand back a bit behind your tripod if using big glass. When I was younger I was able to do flight with the central sensor but now I generally rely on 45-Point AFPS (as I did here).

Black-bellied Plover in breeding plumage
North Beach Lagoon, Fort DeSoto Park
St. Petersburg, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/400 sec. at f/13.

In mid- to late May it is possible to find some northbound migrant shorebirds in full breeding plumage at DeSoto. You usually will not see a black-belly looking this good unless you are on the sub-arctic breeding grounds. There was a light haze so I went with +1/3 as my first choice. The bird flushed before I had a chance to check the histogram but the exposure was perfect.

Lake Martin

Gallery

Roseate Spoonbill feeding large chicks, Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/500 sec. at f/8.

With bright sun and thick foliage, photographing spoonbills at the nest is extremely difficult; to find the best angle, keep trying different perspectives...

left: Roseate Spoonbill with wings raised Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/250 sec. at f/16.

While attempting to gather sticks and twigs for their nests, the spoonbills often raise their wings for balance. The more that you know about a bird's habits the better your images will be.

right: Roseate Spoonbills fighting over nest site Lake Martin, LA

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/30 sec. at f/13.

These birds were squabbling seriously for almost thirty minutes. They were well back in the woods in a very dark spot; since it was impossible to make a sharp image I opted to create a series of intentional blurs to accentuate the action.

Yellow-crowned Night-Heron with crawfish, Lake Martin, LA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/250 sec. at f/5.6.

During May, yellow-crowns hunt the edges of the lake for crawfish; it is best to photograph them from your vehicle as they can be skittish.

Black-crowned Night-Heron hunting, Lake Martin, LA

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/200 sec. at f/5.6.

Black-crowns can be photographed easily from your car in most years. The diagonal pose here adds interest.

facing page:
Great Egret nest
with begging young
Lake Martin, LA

Canon 600mm f/4L IS lens with EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/400 sec. at f/8.

I went with a bit of extra depth of field here as the birds were on slightly different planes.

right: Great Egret chicks
in cypress tree
Lake Martin, LA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/8.

Creating balanced compositions with three birds in the frame can be tricky. The triangular arrangement worked well here. Note the three perfect head positions.

left: Great Egret in cypress swamp on foggy morning Lake Martin, LA

Canon 28-135mm IS lens (handheld at 60mm) with EOS-1Ds. ISO 400. Evaluative Metering +1/3 stop: 1/20 sec. at f/5.

Lake Martin is a beautiful place, especially on foggy mornings. Highly successful stock photographer Charlie Krebs was kind enough to help both me and my IPT group create some quality scenic images. If you saw the original RAW image without understanding the full potential of digital photography, you would surely have deleted it. IS allowed me to work with a relatively low ISO.

Green Heron, Lake Martin, LA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/250 sec. at f/5.6.

While Lake Martin's nesting birds are best photographed from the road while standing behind a big lens, it pays to stay in your car when attempting to photograph the herons and egrets that are foraging along the edge of the lake. Patti Ardoin who visits most days in spring has some killer images of this species eating a huge bream...

Nome, Alaska

Gallery

Arctic Tern, hovering, Nome, AK

Canon 300mm f/4L IS lens with EOS-1D. ISO 250. Evaluative Metering +1 1/3 stops: 1/3200 sec. at f/4.

This species is very aggressive when defending its territory. Wear a hat and be sure to work the edges of the colony and to keep moving.

left: Golden-crowned Sparrow singing, Nome, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/11.

We used a small tape player and a single speaker to play a tape recording of this sparrow's song. He was amazingly cooperative: he returned to the same perch time and again for more than an hour and sang his heart out. I was able to stop down for extra depth-of-field on the bird without bringing up any background detail because the background was at least fifty feet from the perch.

right: Whimbrel near nest, Nome, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 160. Evaluative Metering +1/3 stop: 1/250 sec. at f/5.6. Fill Flash at -1 1/3 stops with Better Beamer.

After finding the nest with eggs, we sat quietly as the birds alternately fed on bugs and took turns on the nest. Can you figure out why I dropped down to ISO 160? I was in Program mode and wanted to maintain the wide-open aperture. I much prefer this front-end vertical portrait to barely fitting the whole bird in the frame...

left: Pacific Golden-Plover male on nest, Nome, AK

Canon 600mm f/4L IS lens with 2X II TC, 25mm Extension Tube, and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/250 sec. at f/8.

We found this nest about eight miles out of town on the Council Road. The female wanted nothing to do with us but the male quickly accepted our presence and sat placidly on its nest with four eggs.

right: Common Redpoll Nome, AK

Canon 600mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/250 sec. at f/13 in Program mode. Fill Flash at -1 2/3 stops with Better Beamer.

On some mornings, the redpolls would jump all over the tape and on other days they would totally ignore it.

left: Semipalmated Sandpiper singing male, Nome, AK

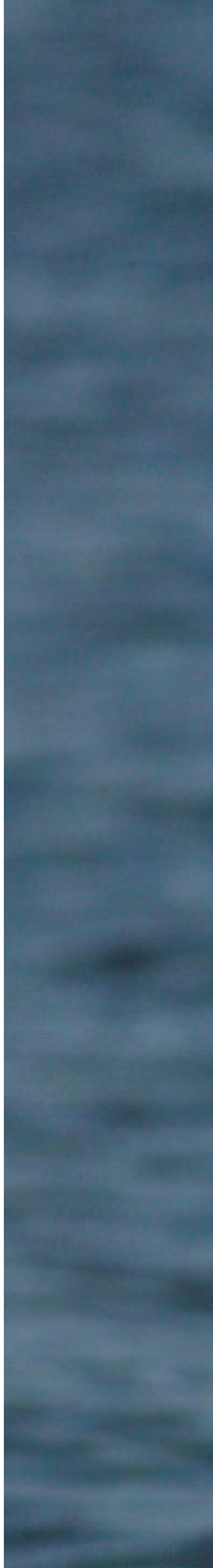
Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 250. Evaluative Metering -1/3 stop: 1/250 sec. at f/8. Fill Flash with Better Beamer at -1 stop.

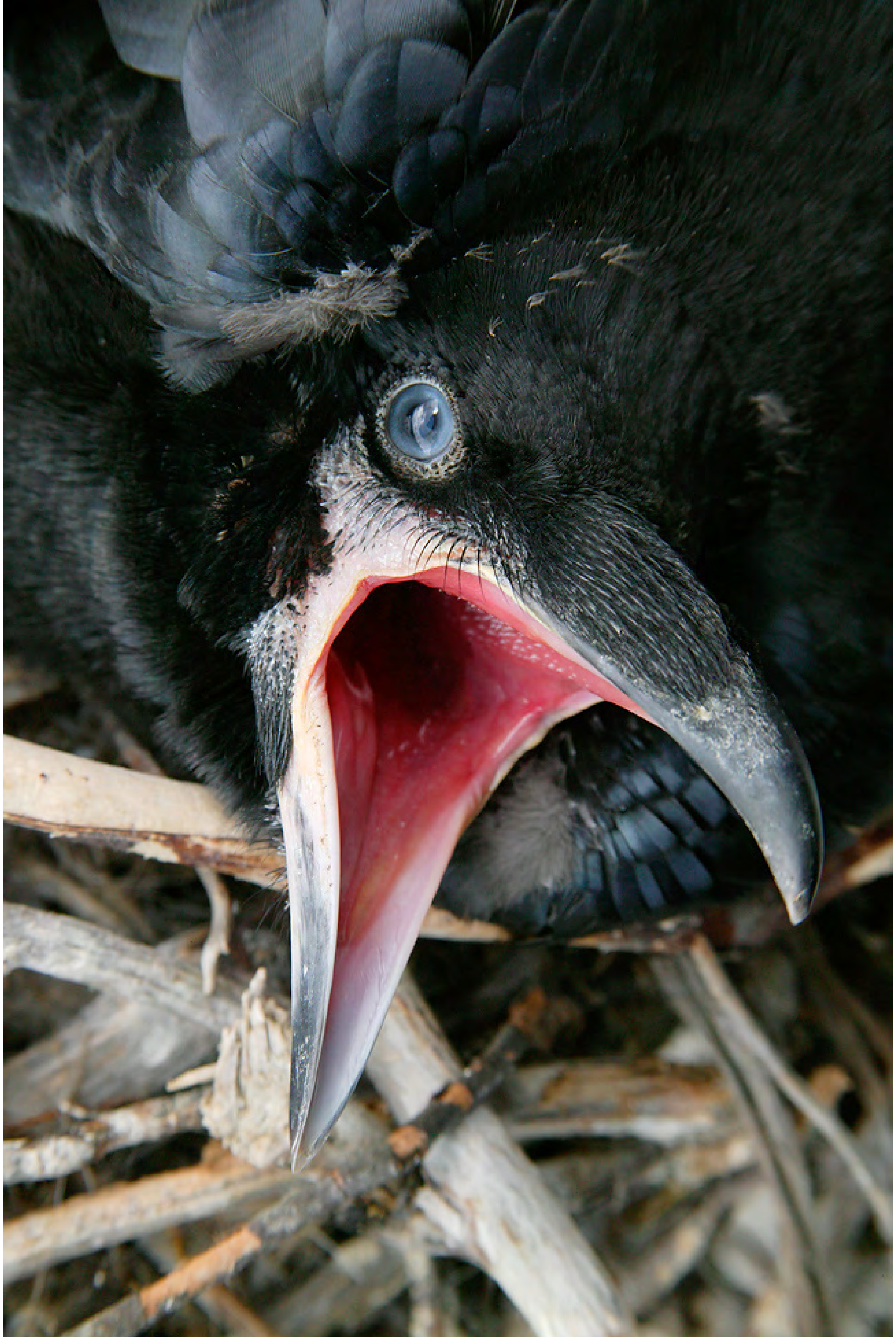
Incubating male semis often leave their nests to sing in hopes of attracting a female for an extra-pair copulation or two.

facing page: Black-leggged Kittiwake with fish in bill, Nome, AK

Canon 100-400mm 4L IS zoom lens with EOS-1Ds. ISO 320. Evaluative Metering -1/3 stop: 1/1000 sec. at f/5.6 set manually after checking histogram.

There are runs of small fish in Nome in June. Locals gather on the shore of the Bering Sea to scoop up net-fulls of them and the kittiwakes and Mew Gulls join in. The runs may occur at any time so you simply need to keep your eyes open to enjoy some great flight photography.





Photographer, digital expert, friend, and IPT-veteran Matt Hagadorn photographing Common Raven chicks in the nest on Council Road.

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Common Raven chick in nest, Nome, AK

Canon 28-135mm IS lens (handheld at 135mm) with EOS-1Ds. ISO 400. Evaluative Metering -2/3 stop: 1/80 sec. at f/11.

Former student and former employee Ralph Paonessa, a friend and colleague who now leads photo tours all over the Americas, told me about this nest and added, "It cannot be photographed." I did not believe him... Everyone in the group took turns hanging over the edge of the bridge with a short lens in hand.

Western Sandpiper in full breeding plumage, Nome, AK

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/1000 sec. at f/5.6.

I first went to Nome in hopes of photographing this species in breeding plumage. I had photographed in the sub-arctic several times before at Churchill, Manitoba, but westerns do not breed there.

Galapagos

Gallery

Blue-footed Booby, yawning chick, Tower Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens (handheld at 173mm) with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/100 sec. at f/4.5.

With the tame birds in the Galapagos, the 70-200mm f/2.8 IS L zoom lens with and without the 1.4 teleconverter was a valuable tool.

above: Blue-footed Booby with just-hatched chick
Hood Island, Galapagos, Ecuador

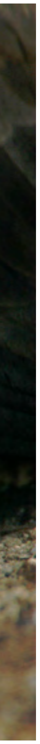
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/320 sec. at f/5.6.

When we first walked by this nest, the bird was standing over her two eggs. Minutes later, there was one egg and one chick! I used central sensor/One-Shot AF to focus on the chick's mud-covered eye and then re-framed the image as above.

left: Blue-footed Booby in early morning light
North Seymour Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 320. Evaluative Metering -2/3 stop: 1/1600 sec. at f/5.6.

With the dark blue water, significant underexposure was needed to keep from burning the whites despite the soft, early morning light.



right: Blue-footed Booby chick
close-up of growing scapulars
North Seymour Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens with 1.4X II TC (handheld at 280mm) and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/5000 sec. at f/4.

The tameness of both the adult and the young birds was astounding.

below: Blue-footed Booby in early morning light
North Seymour Island, Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens (handheld at 280mm) with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/8.

Getting low by sitting on the ground is often a good strategy as it softens up the backgrounds. The background is farther from the subject when you are sitting than it is when you are standing.

all: Waved Albatross, Hood Island, Galapagos, Ecuador

above: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/2500 sec. at f/5.6.

When I made the flight image above, the sun had just come out and with all the clouds around, I knew that it would not be out for long. I remember being nervous as I tracked this bird in flight, worrying that I would mis-frame the image... Not to worry. I made the two images on the facing page on our first morning on Hood Island. It was a morning I will never forget. I sat on the path watching a pair of these huge birds clacking their bills in display just a yard from me. I went with the wide-open aperture to reduce background detail and to maintain a fast shutter speed. The name "Waved" Albatross is derived from the pattern on the birds' necks.

above: Canon 70-200mm f/2.8L IS lens with 1.4X II TC (handheld at 280mm) and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/125 sec. at f/5.6.

right: Canon 70-200mm f/2.8L IS lens (handheld at 145mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1000 sec. at f/5.6.

Magnificent Frigatebird in flight, Tower Island, Galapagos, Ecuador

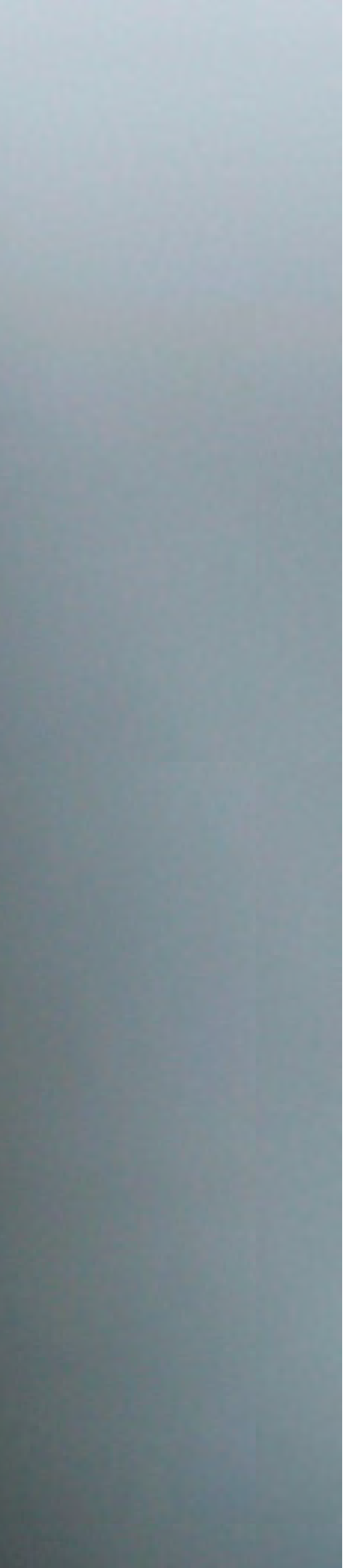
Canon 70-200mm f/2.8L IS lens (handheld at 98mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/2000 sec. at f/8.

I love making flight images on white-sky days but on the Galapagos I preferred my blue-sky flight photos.

Magnificent Frigatebird on nest, Tower Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/160 sec. at f/5.6.

I lowered the tripod and moved to my right to place the green vegetation in the upper-left corner of the frame. This helped balance the composition.



Nazca (formerly Masked) Booby, Galapagos, Ecuador

left: Canon 70-200mm f/2.8L IS lens (handheld at 230mm) with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/250 sec. at f/8.

right: Canon 70-200mm f/2.8L IS lens (handheld at 115mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1600 sec. at f/8.

The Nazca Boobies were among my favorite Galapagos subjects. If you got low and moved slowly they were absolutely fearless. The bird on the facing page was photographed on Hood Island, the courting birds above on Tower Island.

left: Red-footed Booby, light phase
Tower Island, Galapagos, Ecuador

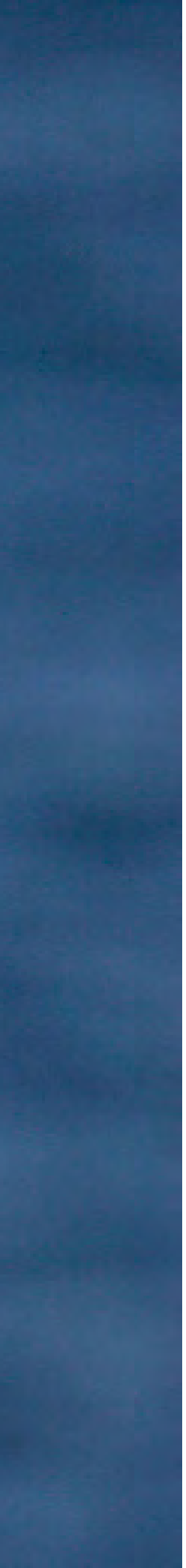
Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/500 sec. at f/5 in Manual Mode.

The coloration of the face and bill of these birds reminded me of white phase Reddish Egret in full breeding plumage.

above: Flightless Cormorant on nest
Point Espinoza, Fernandina Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/320 sec. at f/8.

We sailed a long, long way to photograph this species, which occurs only in the far western section of the archipelago.



left: Red-billed Tropicbird in flight
South Plaza I. Galapagos, Ecuador

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/2000 sec. at f/5.6.

The wind was all wrong on our sunny afternoon visit to South Plaza, but once in a while a tropicbird would fly in low to our left as if it were going to land on the cliff. Most of them would then make a hard right turn. This gave us the opportunity to create some spectacular "top shot" images showing the patterning of the birds' upper wing surfaces as they banked.   At times you need to study the flight patterns carefully so that you can better anticipate the flight photography opportunities.

right: Swallow-tailed Gull
South Plaza I. Galapagos, Ecuador

Canon 70-200mm f/2.8L IS lens with 1.4X II TC (handheld at 280mm) and EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/1000 sec. at f/5 in Manual Mode.

The 70-200 with the 1.4X teleconverter makes an excellent flight photography combination. I use mine with an EOS-1D Mark II and carry the rig (with the camera strap in place) on my right shoulder.

Yellow Warbler, male, Puerto Ayora, Santa Cruz Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 640. Evaluative Metering at zero: 1/500 sec. at f/5.6.

We photographed the famed Galapagos Tortoises in the morning (in the wild) and had some great chances with the Galapagos race of Yellow Warbler on the grounds of the restaurant where we had lunch. The landbirds were tough, as they are at most places on the planet...

Medium Ground-Finch, bathing male, Puerto Ayora, Santa Cruz Island, Galapagos, Ecuador

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/200 sec. at f/8.

While we were photographing the famed tortoises we found several puddles with bathing songbirds. Here I put the central sensor on the bird's neck and made a long series of images as he splashed around in the small pool.

East Africa

Gallery

Lesser Flamingoes, males courting the smaller female, Lake Nakuru, Kenya.

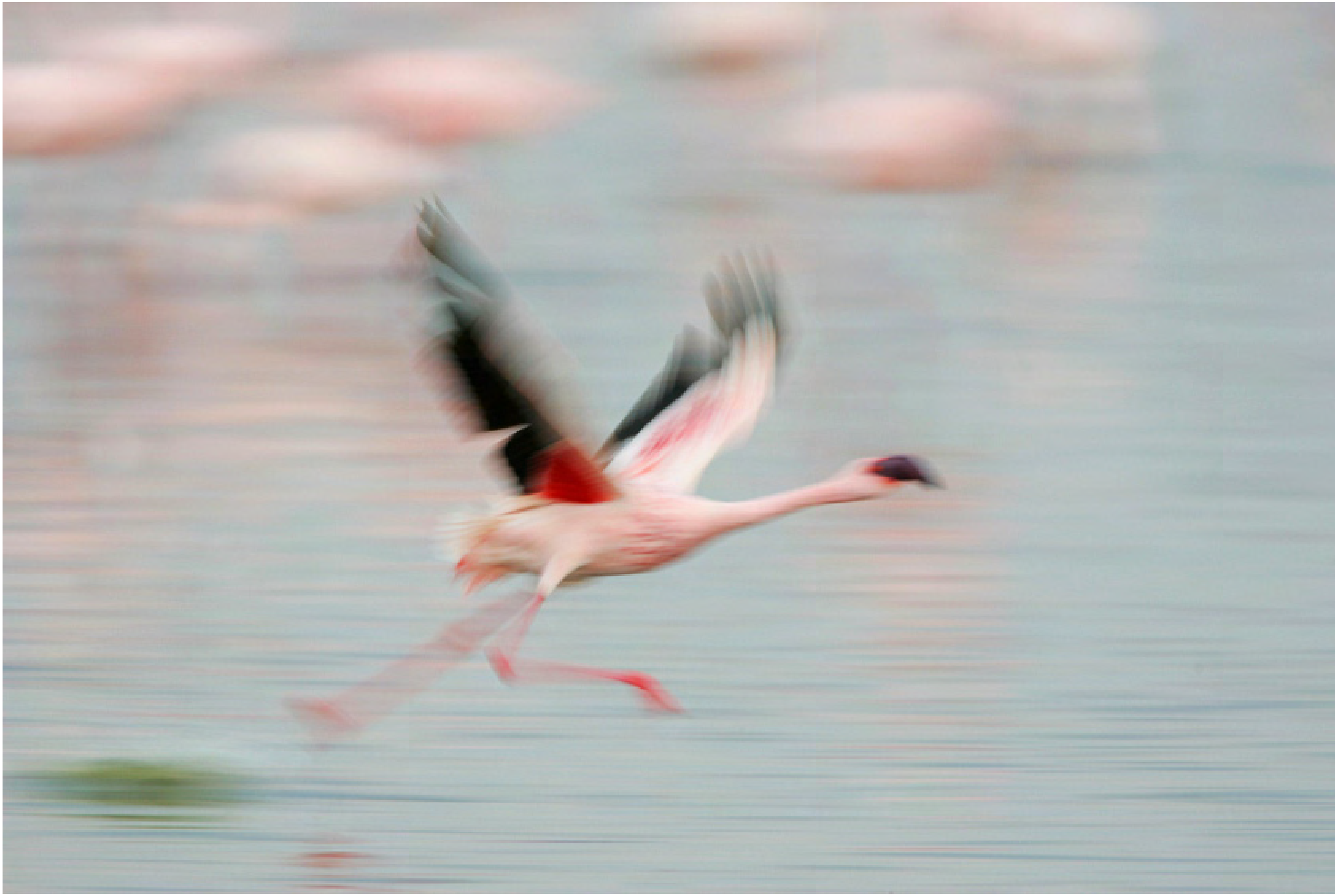
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/1600 sec. at f/8.

Flamingoes are my favorite African avian subjects and Nakuru is the most dependable place to find millions of them.

Lesser Flamingoes, Lake Nakuru, Kenya

Canon 70-200mm f/2.8L IS lens (handheld at 70mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1 /5000 sec. at f/2.8.

This is a panoramic crop from a Mark II capture that was up-sized in Photoshop using Bicubic Smoother. I generally re-size to a 48MB 16-bit file, which is then flattened and saved as a 24MB 8-bit master file. Images selected by Corbis are up-sized to 50mb 8-bit files.



left: Lesser Flamingo take-off blur Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 100. Evaluative Metering +1 stop: 1/60 sec. at f/7.1.

On a cloudy afternoon I decided to make some intentional blurs of the flamingoes taking off. I love the splash of green algae in the lower left-hand corner. I had noticed that, as the birds ran to take off, the splashing of their feet would stir up little puddles of algae.

right: Lesser Flamingo elegant wing-stretch Lake Nakuru, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/800 sec. at f/11.

It is very difficult to photograph a single flamingo... It is equally difficult to get the eyes sharp. With most images, it is necessary, as I have done here, to select the eye and then reduce saturation for the red channel.

both: Lesser Flamingoes, Lake Nakuru, Kenya

facing page: Canon 70-200mm f/2.8L IS lens (handheld at 75mm) with EOS-1D Mark II. ISO 100. Evaluative Metering +1 stop: 1/320 sec. at f/4.

above: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 100. Evaluative Metering +1/3 stop: 1/1600 sec. at f/8.

With the beautiful clouds and the still water (facing page), going wide was the obvious choice. It seems as if the flamingoes ***never take off towards you*** *even when the wind and sun are together. I was lucky here to avoid any serious merges, especially with the head of the last bird and the rear of the third bird. When I am attempting to do small groups in flight, I always use 45-Point AFPS. I chose f/8 for some extra depth of field.*

left:
Helmeted Guinea-fowl
Tarangire Nat. Pk., Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/500 sec. at f/8.

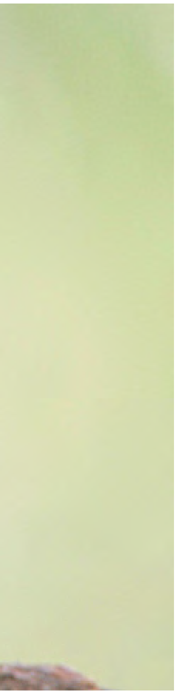
Guinea-fowls spend most of their time foraging in tall grasses. When we came across a group on some rocks by a river, we were able to make some images with back-grounds much cleaner than usual for this species. In retrospect I wish I had set the aperture to f/5.6...

right:
Grey-crowned Crane
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with stacked 1.4X II and 2X II TCs and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/640 sec. at f/11.

This species was hard to come by on our 2005 Kenya safari. Here I chose to make a horizontal image because there were simply too many distracting elements by the bird's feet to go vertical. Though it was not my motivation, this image could easily be used as a two-page spread with lots of room for text.

All of the images on this two-page spread were created on a single afternoon at a feeder set up near the bar at the Island Safari Club, Lake Baringo, Kenya. As you can see, we used a variety of logs, sticks, and rocks as perches. Above the feeder was an acacia tree (seen at left) that the birds perched in on their way to our feeder. With permission from the camp manager, we pruned the acacia a bit. The key to the whole thing was skipping a boat ride so that we could make images when the perches were in the shade. I deleted every image that I had made on previous afternoons when the perches had been lit by direct sun.



clockwise from top left: Jackson’s Golden-backed Weaver, Little Weaver, Red-fronted Barbet, Lesser Masked Weaver, Lesser Masked Weaver (female), and Little Weaver

All of the images here were made with the Canon 500mm f/4L IS lens with the 1.4X II TC, a 25mm Extension Tube, and the EOS-1D Mark I. Fill Flash was used for all of the images. In addition to the species listed above, we photographed about eight additional species at our setup. The staff had been feeding the birds regularly at the bar; we improved it for photography.

left: Nubian Vulture
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/400 sec. at f/11 in Manual Mode.

Though Nubians are huge vultures, they are very shy. As such they are usually the last vultures to feed at a kill. The van had to be maneuvered carefully in order for us to get in close enough to make head portraits of this bird.

right: Nubian Vulture
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/1000 sec. at f/8 in Manual Mode.

If you find a kill in early morning and the wind has an easterly component, you will likely enjoy some wonderful flight photography. Once you come up with a good exposure, it is best to set it manually so that background tonality or subject size will not unduly influence the meter.

Ruppell's Griffon Vulture at kill with blood-soaked head and neck, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/800 sec. at f/11 in Manual Mode.

When photographing vultures at a kill, it is extremely difficult to isolate your subject. Here, I went to the 2X TC to do so.

African White-backed Vulture taking flight in early morning light, Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/1250 sec. at f/5.6.

Just after dawn, many of the vultures sit atop termite mounds. Though some of them stay for close-ups, be ready as the driver approaches them.

left:
Long-tailed Cormorant, Lake Baringo, Kenya

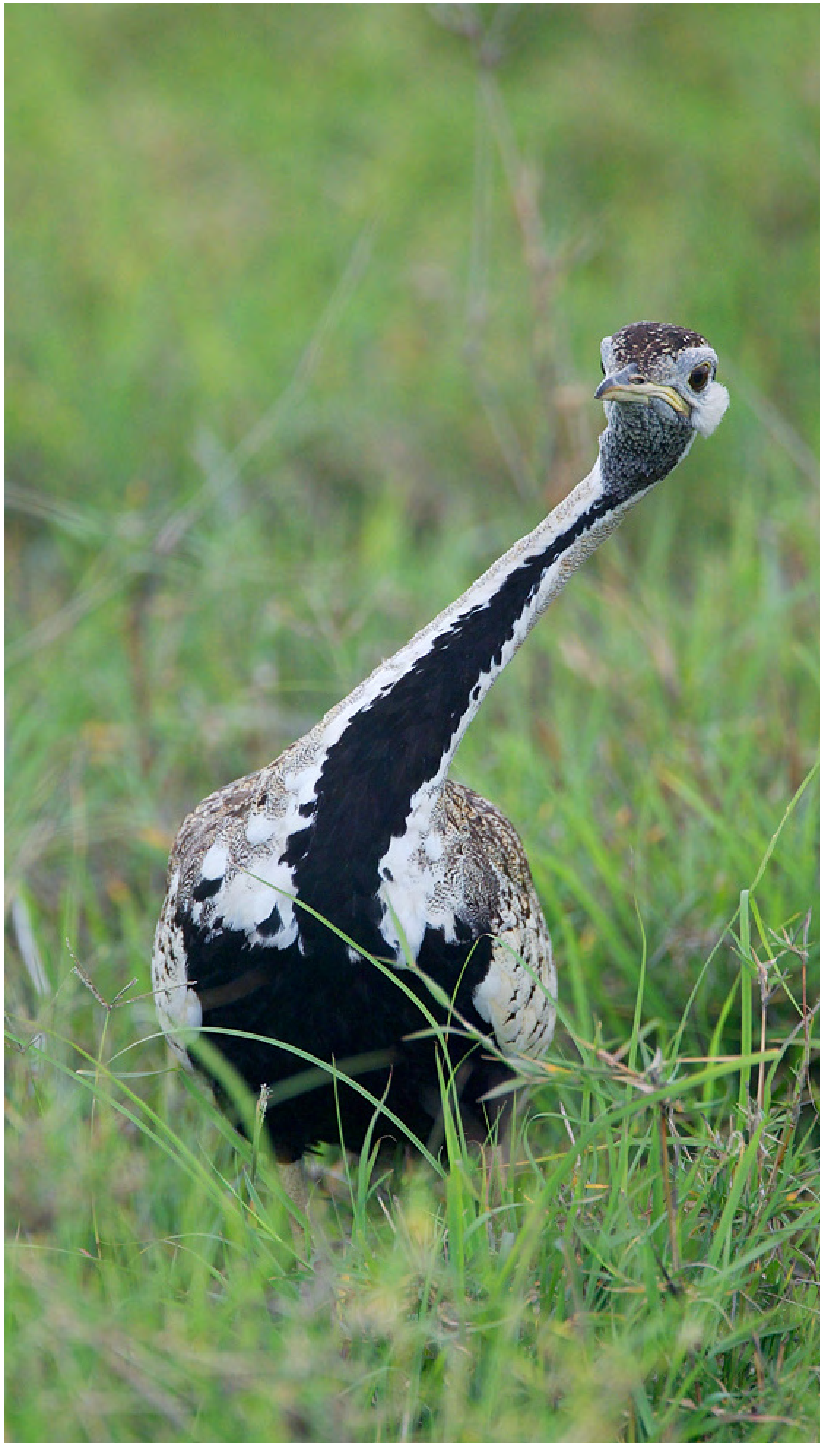
Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/8.

I made a long series of images of this bird from a very still boat with the 500mm set up on my everyday tripod, the Gitzo CF 1325 (which was topped with a Wimberley

right:
Winding Cisticola Ngorongoro Crater Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/8. Fill Flash at -1 stop with Better Beamer.

This bird sat patiently near the van for more than fifteen minutes while we photographed Cape Buffaloes mud bathing. I decided to go for it and still it sat.



left:
Hartlaub's Bustard
Ngorongoro Crater
Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/320 sec. at f/5.6.

Without 45-point AFPS it would have been impossible to create this image as the bird was waving its neck back and forth like a cobra...

right:
Wattled Plover
Maasai Mara, Kenya

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/800 sec. at f/8.

After we found and photographed this interesting subject, we got stuck in the mud for about three hours...

St. Augustine
Alligator Farm
Gallery

Wood Stork in flight, St. Augustine Alligator Farm, St. Augustine, FL

Canon 100-400mm L IS zoom lens (handheld at 170mm) with EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/1000 sec. at f/8. Fill Flash at -1 stop with High Speed Synch

The Farm's Wood Storks have been doing fantastically well for the last few seasons: 2005 was a record-breaking year for them.

left: Cattle Egret
in breeding plumage
St. Augustine Alligator Farm
St. Augustine, FL

Canon 500mm f/4L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/200 sec. at f/4. Fill Flash at -2 stops with Better Beamer.

In addition to the big dead perch tree they erected, the folks at the farm put in a few additional single perches in good locations (i.e., with clean, distant backgrounds.)

facing page:
Cattle Egret
all wet and squawking
St. Augustine Alligator Farm
St. Augustine, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering +1 stop: 1/800 sec. at f/5.6. High Speed Synch Fill Flash at -2 stops with Better Beamer.

I love photographing during thunderstorms. Since I discovered the Umbrella Clamp Rig, doing so has become a lot easier. It is even a snap to use flash under a big umbrella when it is pouring. You do, however, need to be careful of lightning...

Cattle Egret, breeding plumage, St. Augustine Alligator Farm, St. Augustine, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1D Mark II. ISO 250. Evaluative Metering at zero: 1/60 sec. at f/8. Fill Flash at -1 stop w/BB.

Making tight head portraits of Cattle Egrets is always a thrill for me. I chose to include a bit of out-of-focus green foliage to add a bit of interest...

Great Egret, breeding plumage, crest blowing, St. Augustine Alligator Farm, St. Augustine, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds. ISO 250. Evaluative Metering +2/3 stop: 1/250 sec. at f/6.3. Fill Flash at -1 stop w/BB.

Birds almost always perch facing into the wind. When they don't, as here, there is a good chance that some feathers might be blown out of place...

Great Egret
feeding small chicks
St. Augustine Alligator Farm
St. Augustine, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds. ISO 125. Manual Mode: 1/60 sec. at f/10. Flash as main light at -1/3 stop with Better Beamer.

Many of the Great Egret nests at the far end of the boardwalk on both sides of the ramp that leads up to the Gomek exhibit are below eye level. The exposure, which was set manually, was one stop under the metered exposure, thus the fairly dark background.

Tricolored Heron
neck pumping display
St. Augustine Alligator Farm
St. Augustine, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/200 sec. at f/5.6. Fill Flash at -1 stop with Better Beamer.

The timing of courtship and nesting varies with individual pairs. This breeding plumage Tricolored Heron was busy displaying for a mate in early May (which is pretty much right on schedule) but it would not be uncommon to see the same behavior in mid-June. This makes for a great variety of photographic opportunities.

Tricolored Heron turning egg, St. Augustine Alligator Farm, St. Augustine, FL

Canon 500mm f/4L IS lens with 75mm of extension and EOS-1Ds. ISO 250. Evaluative Metering at zero: 1/40 sec. at f/8. Fill Flash at -1 stop with Better Beamer.

Many of the nests at the Farm are within arm's length of the boardwalk so bring your extension tubes!

facing page:
Tricolored Heron
in flight, white sky
St. Augustine Alligator Farm
St. Augustine, FL

Canon 300mm f/4L IS lens with 1.4X II TC and EOS-1D. ISO 250. Evaluative Metering +1 stop of reading off the sky: 1/500 sec. at f/7.1. Fill Flash at -1 stop with Better Beamer.

One advantage of the EOS-1D was that it had a synch speed of 1/500th sec. All subsequent generations of Canon professional digital cameras have a 1/250 sec. synch speed. I have been doing and loving flash flight ever since I first picked up a digital camera, and much of what I learned, I learned at St. Augustine.

Chapter IX Recent Work: An Overview

Like all photographers, I have a special fondness for my latest, greatest photographs <smile>. Except for the image on the facing page (which I made on the 2005 Post X-mas SW Florida IPT), all of the images presented in this last chapter were created during the first four months of 2006. Viewing the diversity of this collection will help to give you an understanding of my intense travel schedule and my intense desire to create new and exciting images. The captions are designed to reinforce many of the principles covered in the main body of this work. A short essay follows the image galleries.

Great Blue Heron starburst Sanibel, FL

Canon 100-400mm L IS zoom lens handheld at 135mm with EOS-1D Mark II. ISO 50. Evaluative Metering -3 stops: 1/250 sec. at f/32.

To create this one I needed to place the sun directly behind the hole at the crook of the bird's neck... The small aperture yielded the starburst. I converted using shade as the White Balance to enhance the color.

Snowy Plover, male Sanibel, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II (on Panning Ground Pod). ISO 250. Evaluative Metering -1/3 stop: 1/800 sec. at f/11.

Nothing beats getting low for

San Diego IPT

Gallery

Brown Pelicans, preening twins, LaJolla, CA

Canon 100-400mm L IS zoom lens (handheld at 275mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/11.

I made a long series of images of these guys preening and this was my favorite by far. It was the only one of the series that I kept. What made this one best? Two perfect head angles...

Brown Pelican, full breeding plumage
LaJolla, CA

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/2000 sec. at f/5.6.

With a gorgeous bird, a perfect head angle, the red bill pouch and black breast, and the distant Pacific-blue background, this is one of two classic LaJolla compositions.

Brown Pelican, full breeding plumage
LaJolla, CA

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/8.

To create this, the other LaJolla classic, I simply added the 1.4X teleconverter.

facing page:
Brown Pelican, sleeping
LaJolla, CA

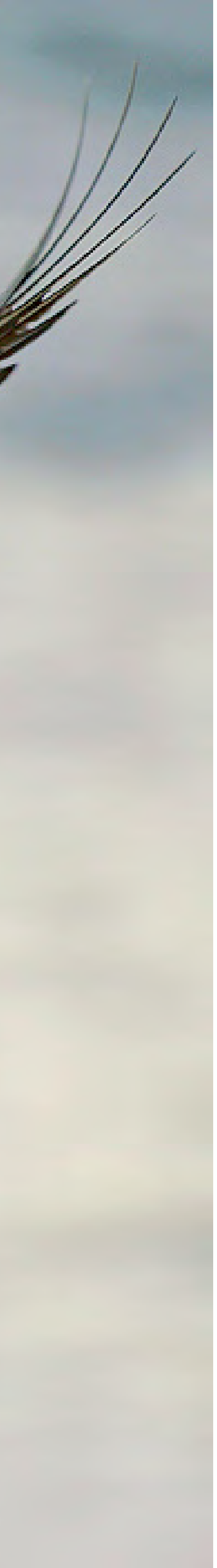
Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 640. Evaluative Metering +2/3 stop: 1/250 sec. at f/13 set manually.

I prefer to make images of sleeping birds from above their position. A LaJolla, there are several places where this can be done consistently. In this photograph I love the soft light and the green water.

right:
Brown Pelican, sleeping
LaJolla, CA

Canon 100-400mm L IS zoom lens (handheld at 400mm) with EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/9 set manually.

Very few California Brown Pelicans have orange bill pouches. As time goes by, I find myself working in Manual Mode more and more, after confirming the correct exposure via histogram.



Brown Pelican landing, LaJolla, CA

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 500. Evaluative Metering +2 stops off sky: 1/500 sec. at f/4 set manually. Fill Flash with Better Beamer at -1 stop.

Cropping, cloning, and lots of color work in Photoshop created the image on the facing page from the converted RAW file above. The original had several unwanted elements as well as a strong cyan cast.

Harbor Seal, Children's Cove, LaJolla, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II (on Panning Ground Pod). ISO 800. Evaluative Metering at zero: 1/60 sec. at f/5.6.

The out of focus red-brick seawall in the background adds interest to this image.

Surfbird, winter plumage, LaJolla, CA

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/640 sec. at f/11 set manually.

With the sun out and the scene averaging to a middle-tone the metered exposure was--as expected--perfect.

American Coot, Santee Lakes, CA

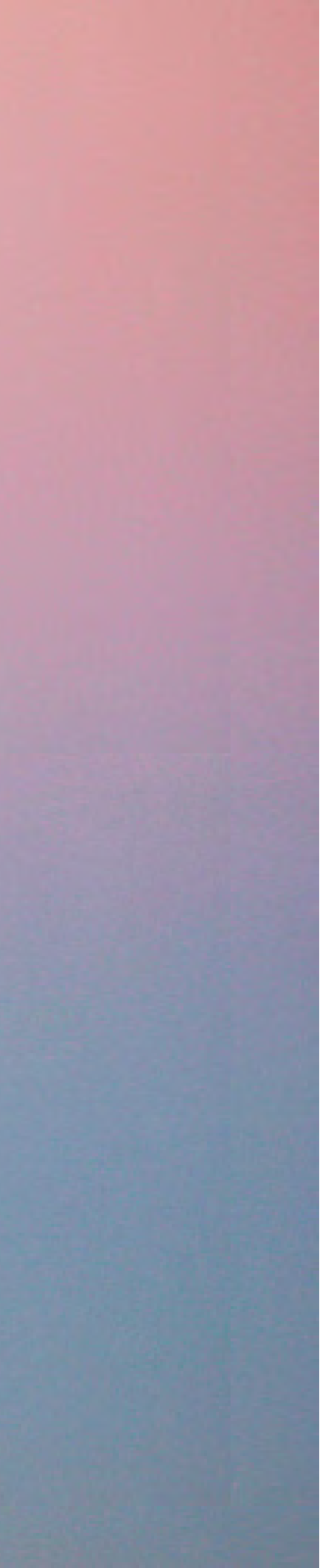
Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/500 sec. at f/11 set manually.

When photographing coots, beware burning the bright white bill.

Lesser Scaup, Glorietta Bay, Coronado, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/800 sec. at f/11 set manually.

It is the dreamy quality of the water that makes both of the images on this spread successful.



both images this spread: Western Gull, LaJolla, CA

left: Canon 100-400mm f/4L IS lens (handheld at 260mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1 2/3 stops off of pink sky: 1/80 sec. at f/5.6 set manually. Flash at -1 stop.

above: Canon 100-400mm f/4L IS lens (handheld at 400mm) with EOS-1Ds Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/1250 sec. at f/13 set manually.

For the image left, I rested my left forearm on the crest of a dirt ridge to ensure making a sharp image at a slow shutter speed. IS helps in such situations, but using excellent sharpness techniques allow you to push the envelope even further. The image above proves again that when you point a long lens at a gull it will usually do something interesting in short order. Note the great versatility of the 100-400mm L IS zoom lens which was used to create both of these photos.

Heerman's Gull, breeding plumage, Coronado, CA

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/100 sec. at f/9.

To create this patriotic image I lined up very carefully so that a large blue garbage can served as the background.

Western Gull at dusk, Coronado, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 800. Manual Mode: 1/320 sec. at f/5.6. Flash at -1/3 stop with BB.

Here, I used the flash as main light technique to enrich the sunset colors. The ambient exposure was set about two stops too dark while the flash provided all of the illumination for the subject. You need to check both the histogram and the LCD screen when making images like this.

The Cave Shop Cliffs, LaJolla, CA

Canon 28-135mm IS zoom lens with (tripod-mounted) EOS-1Ds Mark II. ISO 1250. Evaluative Metering at zero: 20 seconds at f/18.

Inspired by a Jim Brandenburg forest image made at night, I created this one in near-total darkness at about 6:30 am in January 2006. Had it not been for the street lamps behind us, I would not have been able to focus. (It is best to use CF-4-3 for scenics.) I was flattered by the fact that after John Shaw saw this image he went to the same spot to make the next morning with a short lens...

Black-bellied Plover in molten gold reflections at sunset, LaJolla Shores Beach, CA

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering -1 stop: 1/800 sec. at f/18.

Creating images like this is usually hard work; every time the bird moves you have to move also to juxtapose the bird with the brightest colors. Even though I underexposed here by a stop, I needed to convert the RAW image one stop darker in order to avoid any overexposed highlights.

Tanzania 2006

Photo Safari

Gallery

African Lion cub resting, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 800. Evaluative Metering -1/3 stop: 1/160 sec. at f/8.

Our 2006 trip shall forever be remembered as the "Lion Safari." We had lions on top of lions on top of lions. Everywhere. I mistakenly made this image at -1/3 stop, but digital is forgiving. I lightened the image considerably during the RAW conversion and it looks just fine.

facing page: African Lions
tail necklace

right: African Lion
battle scarred

Both: Ndutu, Tanzania
(Ngorongoro Conservation Area)

both: Canon 500mm f/4L IS lens with EOS-1Ds Mark II.

left: ISO 800. Evaluative Metering at zero: 1/640 sec. at f/4.

right: Evaluative Metering at zero: 1/250 sec. at f/5.6.

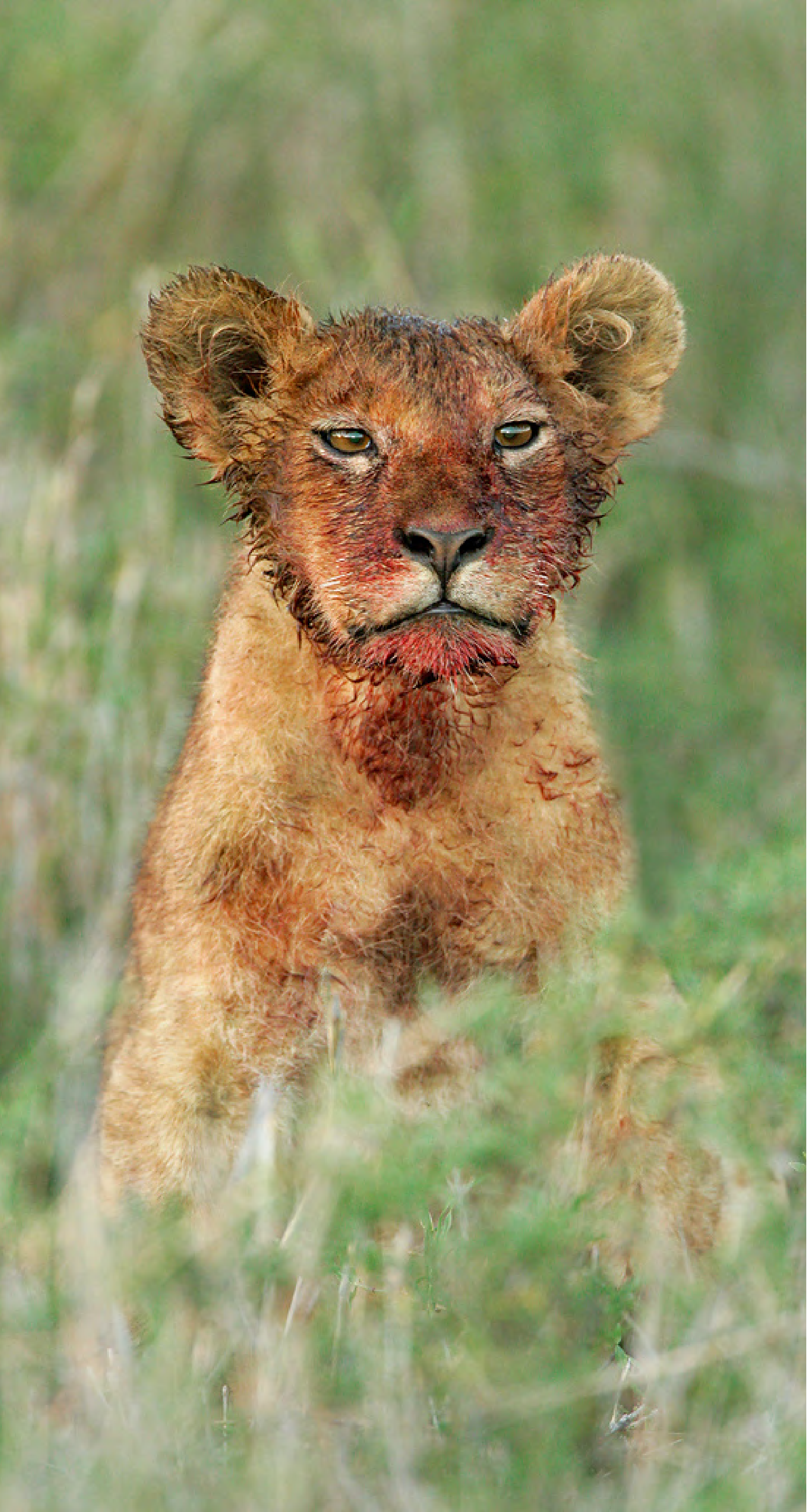
I spent lots of time on this safari trying to "Be like Todd," that is, to be able to see and capture the fleeting moment. (Todd Gustafson and I co-lead many African Photo Safaris.) With the help of 45-Point AFPS, I did just that with the image on the facing page.

For the image right, our driver guide approached the old lion slowly as it was resting in the shade. When it is sunny and bright do spend some time looking for animals in the shade.

African Lions on zebra kill, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/160 sec. at f/4.

Even though sunrise was 45 minutes away, I had our driver, Salvatore, position our van for the best sun angle. (We were the first van there.)



both: African Lion, blood-soaked. left: cub; above: female
Ndutu, Ngorongoro Conservation Area, Tanzania

left: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 800. Evaluative Metering +1/3 stop: 1/80 sec. at f/5.6. Fill Flash at -1 stop with Better Beamer.

right: Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/400 sec. at f/8.

The cub at left finished its breakfast well before the sun came up so I needed at least ISO 800 to work with the 1.4X. When the sun came up I dropped down to ISO 400, slapped on the 2X, and waited for momma to lift her head above the kill.

both: African Lion
left: cub pulling tail of lioness
right: big male drinking
Ndutu, Tanzania
(Ngorongoro Conservation Area)

left: Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 800. Evaluative Metering +2/3 stop: 1/125 sec. at f/4. Fill Flash at -1 stop with Better Beamer.

right: Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/800 sec. at f/8.

The playful cub, left, tugged on momma's tail as she walked away from the kill.

The big male, right, came to drink in the marsh with another large male. Soon after I made this image, we saw a third large male dragging an adult wildebeest through the marsh grasses. I urged the driver to get the van as high as possible so that we might get to photograph the lion with its fresh kill. You can see the results below.

African Lion, lioness hunting, Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/1000 sec. at f/5.6.

As the zebras walked right in front of the lioness, she crouched and tightened her muscles. Todd and I were sure that she would attack. Our shutter-button fingers tensed as well, but she never made a move. And we thought we were gonna be famous...

African Lion, mud-covered male standing over wildebeest kill, Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/400 sec. at f/14.

This big male greeted us on our first afternoon at Crater. Later that day, we saw a pride tracking a huge male Eland as we left the park.

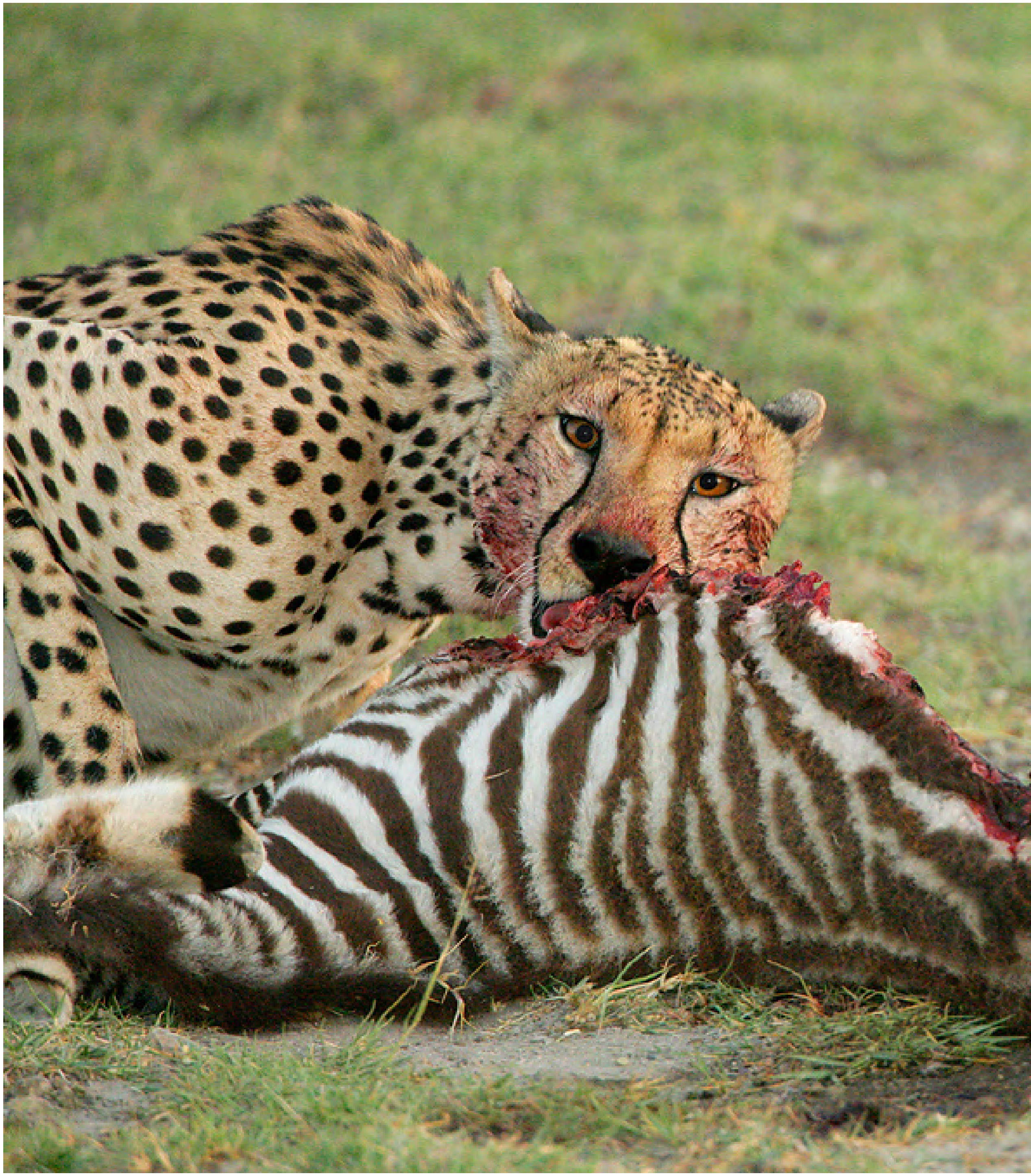
both: Cheetah
left: plains portrait
right: at baby zebra kill
Ndutu, Tanzania
(Ngorongoro Conservation Area)

left: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 50. Evaluative Metering +1/3 stop: 1/320 sec. at f/5.6. High Speed Synch Fill Flash at -2 stops with Better Beamer.

right: Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 1600. Evaluative Metering at zero: 1/160 sec. at f/5.6.

To ensure a soft, out-of-focus background (image left) I dropped down to a van window and worked off the BLUBB. This effectively increased the distance from the subject to the background. Setting ISO 50 allowed me to work wide open without an unduly high shutter speed. (Higher shutter speeds reduce flash output when you are using High Speed Synch.

Our drivers spotted this kill (right) on the way back to the lodge after the sun was already down. In extreme low light situations I do not hesitate to set a high ISO so that I can maintain a shutter speed that is fast enough to produce sharp images. I followed the "eye doctor" techniques to remove the Cheetah's green eye shine.



above: Cape Buffalo & Cattle Egret, Lake Manyara National Park, Tanzania
facing page: Hippopotami mourning dead baby, Ngorongoro Crater, Tanzania

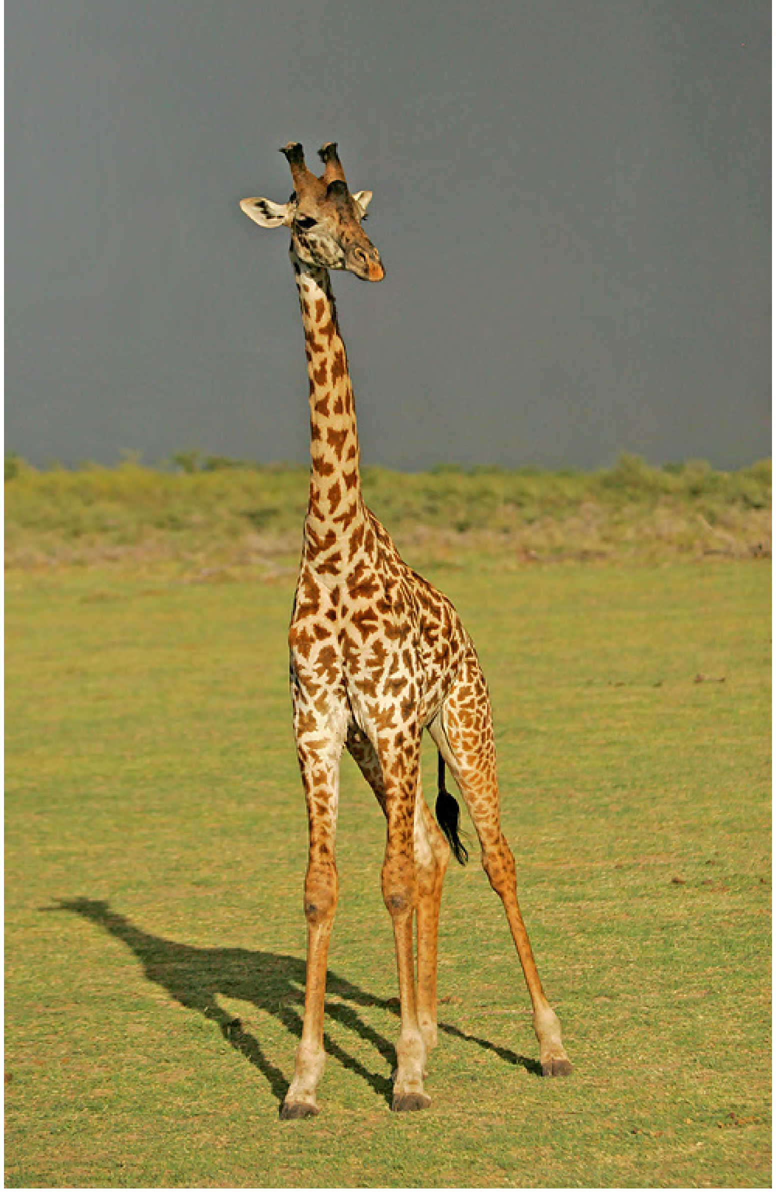
above: Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 640. Evaluative Metering -1/3 stop: 1/320 sec. at f/8.
facing page: Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/7.1.

Each of these images show the beauty of early morning light. With the image above, my concern was getting three good head angles. With the dead baby hippo, I wanted to create images that showed the parents' concern.

African Elephants, young males greeting each other, Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 640. Evaluative Metering +1/3 stop: 1/160 sec. at f/5.6.

On our last morning at Crater we came across a group of seven young males. We stayed with them for more than two hours...



both: Maasai Giraffe, Lake Manyara, Tanzania

both: Canon 70-200mm f/2.8L IS lens with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/8000 sec. at f/3.2 (above) and f/2.8 (right). (Handheld at 105mm, above, and 145mm, right.)

Images of sunlit subjects and grayish-black storm cloud backgrounds are hard to beat. Note that even at the wide apertures the subject in each of these images has been rendered sharp.

Common Zebras jousting, backlit, Lake Manyara National Park, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 800. Evaluative Metering at zero: 1/1600 sec. at f/8.

This image and the one on the facing page were made just a few minutes after the giraffe images on the preceding page. What some folks think of as bad weather can be great weather for nature photography. One van returned to the lodge when they saw the storm approaching and missed the very best afternoon of the entire safari.

Common Zebras jousting, late afternoon light, Lake Manyara National Park, Tanzania

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 800. Evaluative Metering at zero: 1/2500 sec. at f/4.5.

45- point AFPS was easily able to track the action and yielded many sharp images of these spirited animals.

Common Zebras
mother and colt
Ndutu, Tanzania
(Ngorongoro Conservation Area)

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/11.

Images featuring adult and young animals can be powerful, as can images made in soft, sweet light. Throw in the adult looking right down the lens barrel as the youngster nuzzles up to momma and you have a keeper.

Common Zebra colt
Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1600 sec. at f/8.

I waited until this few-hours-old baby zebra was right down my shadow line before making this image. I was fortunate to capture a pose with the legs perfectly positioned. Heck, maybe

Common Zebra newborn foal
Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 400.
Evaluative Metering +1/3 stop: 1/320 sec. at f/4.

When working in soft light, adding 1/3 stop of light to scenes that average to a middle tone is always a good plan.

Common Zebra & Magpie Shrike, Tarangire National Park, Tanzania

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/800 sec. at f/5.6.

When I saw the bird flying past the zebra, I pressed the shutter button and hoped for the best.   When unexpected action occurs, react by depressing the shutter button without thinking...

Wildebeests and Common Zebras on hillside, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 100-400mm L IS zoom lens (handheld at 100mm) with EOS-1D Mark IIN. ISO 250. Evaluative Metering at zero: 1/400 sec. at f/11.

Wildebeests and Common Zebras migrating on plains, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/14.

With the animals walking away from me I needed to focus manually here because the 2X limits AF to the central sensor only. With most long lenses it is impossible to focus manually when working on a beanbag as the focusing ring rests on the bag. With my rig on the Wimberley/Todd Pod combination however, it was easy to focus manually on the closest animals.

Safari van, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 70-200mm f/2.8L IS lens (handheld at 70mm) with EOS-1D Mark II. ISO 800. Evaluative Metering at zero: 1/50 sec. at f/2.8.

The roads in East Africa and the tracks in the parks can be rough, and the dust is almost always thick. Taking good care of your equipment and preventing it from being damaged must be among your primary concerns.

Green (or Plains) Agama Lizard, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and two 25mm Extension tubes with EOS-1Ds Mark II. ISO 500. Evaluative Metering +1/3 stop: 1/200 sec. at f/16.

Placing the extension tubes on the lens in front of the TC forced me to focus manually but allowed for about two feet extra closer focus.

left: Olive Baboon yawning
Lake Manyara National Park, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/60 sec. at f/8.

On sunny afternoons at Manyara, we stayed on the forest road in hopes of finding subjects in the shade. The two clients with me asked "Why are we photographing baboons?" just before this guy let go a huge yawn. They both missed the action...

above and near-left: Blue Monkey, Lake Manyara National Park, Tanzania

facing page: Canon 100-400mm L IS zoom lens with EOS-1D Mark IIN. ISO 1600. Evaluative Metering at zero: 1/200 sec. at f/5.6.
above: Canon 70-200mm f/2.8L IS zoom lens with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/2.8.

The Blue Monkeys along the forest road at Manyara can be very tame, though at times they like to play hide and seek with photographers. After blowing several chances at the leap-of faith image, I was--after exhibiting some uncharacteristic (for me) patience--able to create a decent one. After studying them for a while, we learned their body language and were then able to anticipate their leaps.

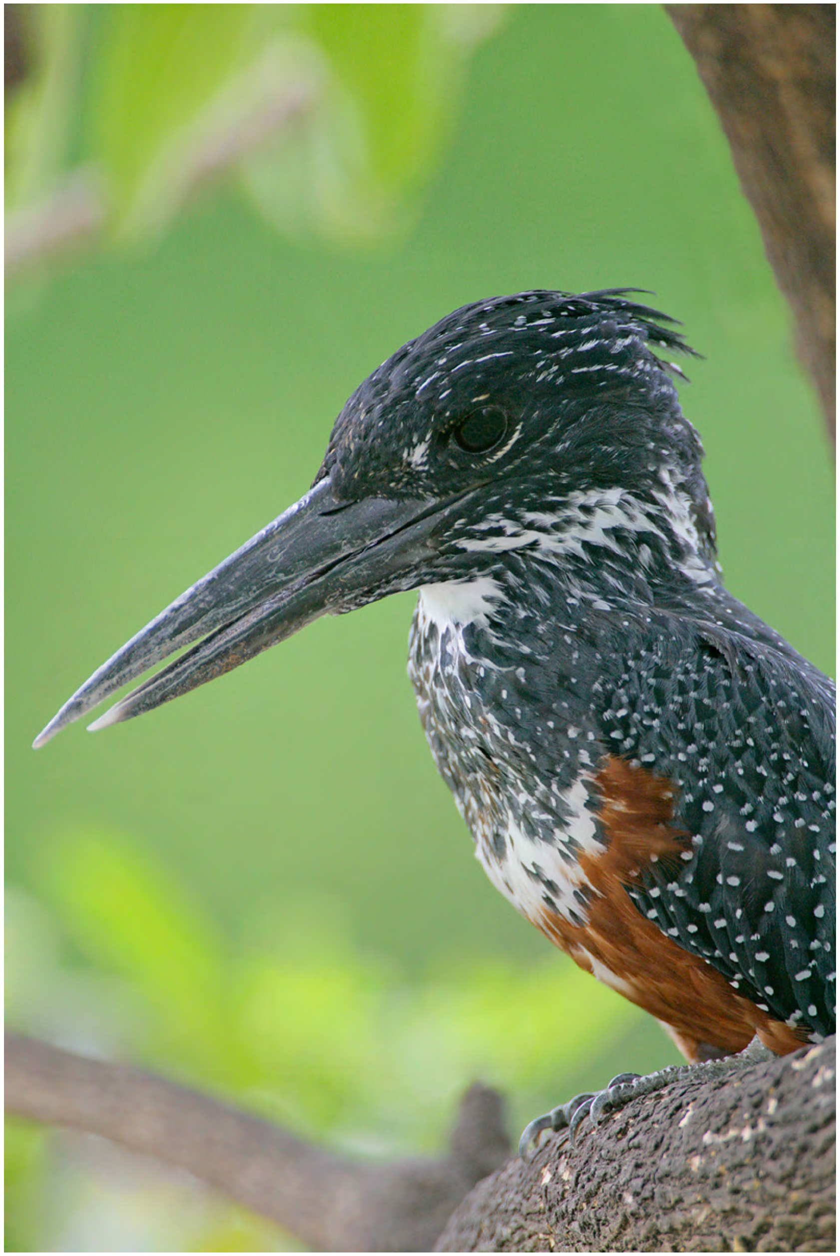
Speckled Mousebird
Tarangire National Park, Tanzania

Striped Kingfisher, immature
Lake Manyara National Park, Tanzania

There is lots of great bird photography in East Africa. Except for the mousebird (500 IS and 1.4X TC), all of the images on this spread were made with the 500 IS and the 2X TC. Photographing small birds from a safari van is quite challenging and at times can be extremely frustrating as the birds are easily flushed. But, with a good driver and good leader/guide communications miracles are sometimes possible. After we were done with the young kingfisher above, we radioed two other vans. He sat for both of them and at one point was joined by a sibling who perched just inches away!

Crested Snake-Eagle
Lake Manyara National Park, Tanzania

I photographed the snake-eagle after sunset at great distance using Manual Flash at 1:1 in an effort to get some flash on the subject. One of our clients yelled from a passing van, “The light is lousy! What are you doing?” When I showed him the optimized image at dinner, he said, “Wow!” Digital allows us to create images in situations where one would simply be wasting film... Todd and I had never gotten anything on Giant Kingfisher until we found this bird perched right next to the road near a creek. It looked as if we were totally blocked by vegetation, but refusing to give up, I had the driver go forward and turn hard right. This gave us the angle and the opening through the leaves that we needed.



Giant Kingfisher
Lake Manyara National Park, Tanzania

both:
White-headed Vulture
Ndutu, Tanzania
(Ngorongoro Conservation Area)

left: Canon 100-400mm L IS lens (handheld at 330mm) with EOS-1D Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/1600 sec. at f/5.6.

right: Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering -2/3 stop: 1/250 sec. at f/8.

left: When I first saw this species at a kill, I did not look at it closely and assumed that it was a very bright Nubian Vulture, but when the Nubians flew in, I saw that they were far larger than these guys. The white-headeds were much more beautiful than their larger cousins. I hope to make some tight head portraits the next time that I have a chance with this species.<smile>

right: We were working a baby Wildebeest kill when we noticed this white-headed perched nearby. He flew in, snatched a tidbit, and landed atop a bush right next to our van. We got some wonderful flight images as he flew in, but once he landed and saw us, he split, leaving his bit of skin and flesh in the thorns at the top of the bush.

left: Common Zebra carcass and vulture **above: Ruppell's Griffon-Vulture**

Ndutu, Ngorongoro Conservation Area, Tanzania

left: Canon 70-200mm f/2.8L IS lens (handheld at 200mm) with EOS-1D Mark IIN. ISO 250. Evaluative Metering at zero: 1/640 sec. at f/11.
above: Canon 100-400mm L IS lens (handheld at 220mm) with EOS-1D Mark II. ISO 400. Evaluative Metering at zero: 1/500 sec. at f/18.

left: I made this image in harsh mid-afternoon light to emphasize the starkness of the scene. A reverse "S" Curves adjustment reduced contrast.
above: Zooming wider than I usually would allowed me to include the woodlands at the bottom of the frame.

Saddle-billed Stork
Mount Meru Game Lodge
Tanzania

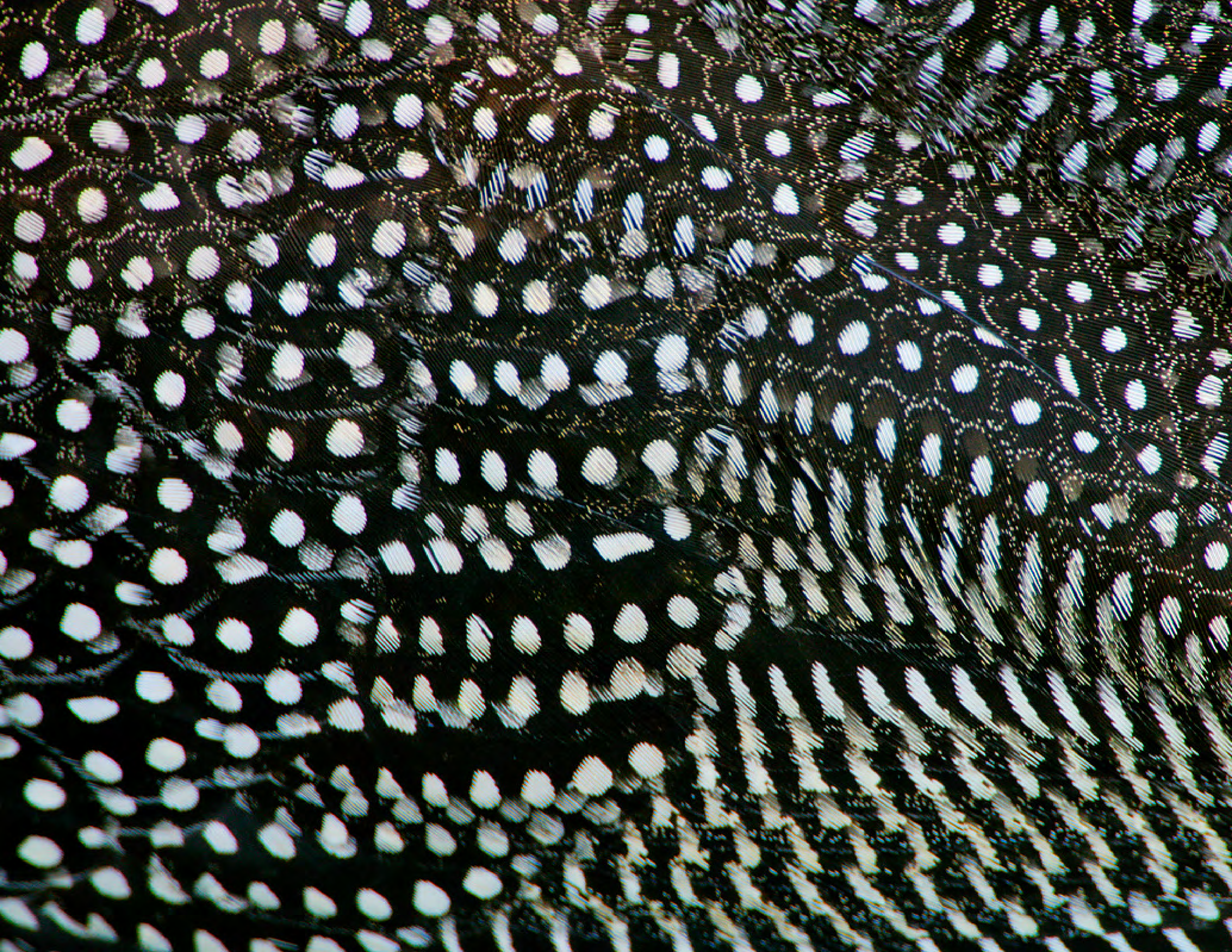
Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 1600. Evaluative Metering +1 stop: 1/40 sec. at f/5.6. Flash at zero with Better Beamer.

I had missed this species on six previous visits to Africa. When we woke up on our first morning of the 2006 Tanzania safari this bird greeted us almost at our cabin doors... I was of course delighted. As light levels were beyond low I used lots of flash to ensure making a sharp image.

Abdim's Stork
Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/400 sec. at f/8.

Birds with glossy plumage are best photographed on cloudy days. It pays to be ready and to keep your eyes open on safari. We had some good chances with this species on the hillside near the exit road from the picnic area by the lake at Crater.



Helmeted Guinea-Fowl plumage detail
Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 640. Evaluative Metering -1/3 stop: 1/60 sec. at f/10. Flash at -1 stop with Better Beamer.

There are almost always a few tame guinea-fowl by the big bush at the picnic area. Most folks ignore them... When I shared this image at dinner everybody loved it. I told them that I made it while they were having lunch!

Shorebird flock against wall of crater
Ngorongoro Crater, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -2/3 stop: 1/640 sec. at f/8.

There was a large flock of Wood Sandpipers and Ruffs at the flamingo lake at Crater. The flock in flight created wonderful patterns. Pre-focusing manually helped me acquire focus quickly.

Lilac-breasted Roller with zebra background, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/400 sec. at f/16.

I did not particularly like the perch or the subject but when some zebras strolled by in the background my interest was heightened!

Acacia tree sunset starburst silhouette, Ndutu, Ngorongoro Conservation Area, Tanzania

Canon 70-200mm f/2.8L IS lens (handheld at 95 mm) with EOS-1D Mark IIN. ISO 250. Evaluative Metering -2 stops: 1/500 sec. at f/32.

Setting an aperture of f/22 or f/32 will usually yield the starburst effect if the sun is partially blocked.

Southwest Florida

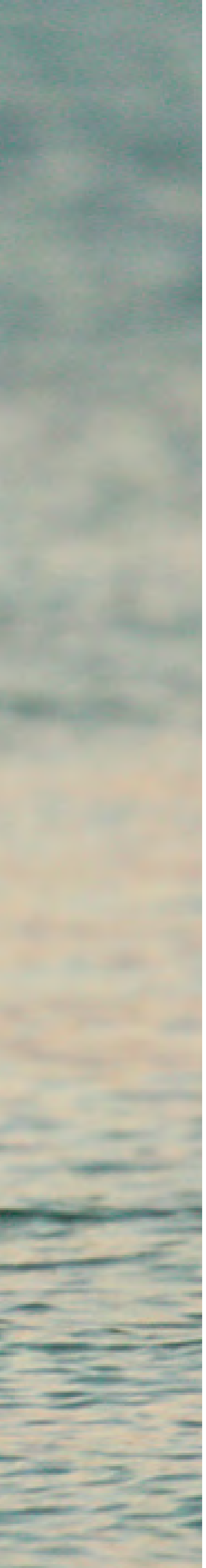
President's Week IPT

Gallery

Brown Pelican swallowing fish, Placida, FL

Canon 70-200mm f/2.8L IS lens with 1.4X II TC and EOS-1D Mark IIN. ISO 400. Evaluative Metering -1/3 stop: 1/1600 sec. at f/8.

One of my main goals on IPTs is to put folks in position to make good photographs. At Placida, that is easy to do. There is no substitute for pressing the shutter button at the peak of the action.



White Pelicans on sandbar
Gasparilla Bay, FL

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering +1 stop: 1/160 sec. at f/5.6 in Program mode. Manual Flash at 1:1 with Better Beamer.

Here I utilized a reverse "C" curve as the main element of my image design. As the birds were a good distance away and it was after sunset, I maximized flash output and then checked the histogram and the image on the LCD to make sure that I was not using too much flash.

The images in this spread and many others in this book labeled "Placida" were made from the deck of Captain Marian Schneider's pontoon boat, "Recovery Room." After a morning at the Venice Rookery, there is no better way to finish off the day than a boat ride with Marian to a sandbar packed with White Pelicans. (Late November through February is best.) You can contact Marian here: http://www.grandetours.com/

White Pelicans
on sandbar at sunset
Gasparilla Bay, FL

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering +1 stop: 1/250 sec. at f/11 in Program mode. Manual Flash at 1:1 with Better Beamer.

Here I "gave away" the sun (i.e., knew that it would be somewhat overexposed) in an effort to avoid underexposing the pelicans. As above, I maximized flash output.

Venice Rookery, South Venice, FL

Canon 28-135mm IS lens with EOS-1Ds Mark II. (Camera mounted on ball head with Wimberley P-5 plate.) ISO 400. Evaluative Metering -1/3 stop: 2 seconds at f/3.5.

This image was made in the near-darkness of predawn as soon as there was enough light to focus (using One-Shot AF/CF-4-3).

above: Great Egret in flight, Venice Rookery, South Venice, FL

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering +2 stops off sky: 1/160 sec. at f/4 in Manual Mode. Manual Flash at 1:2 with Better Beamer.

With the Great Egrets taking off and using the same flight paths, I experimented with the Manual Flash settings and came up with 1:2 as the predawn light levels were increasing. With digital, using flash in the early pre-dawn is like playing the lottery; lots of tickets with a rare winner...

right above: Tricolored Heron, Venice Rookery, South Venice, FL

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/125 sec. at f/5 in Manual Mode. Manual Flash as Main Light at 1:4 with Better Beamer.

Here I should have added lots of light to the metered exposure to keep the overall light tones of the image light. I chose instead to effectively underexpose the background to darken the sky. The flash provided all the light that illuminated the subject.

left:

Great Blue Heron, Venice Rookery, South Venice, FL

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/800 sec. at f/8.

The Venice Rookery continues to offer great photographic opportunities from late October at least through April. You can make lots of great images here with as little as a 300mm f/4 lens and a digital camera with a 1.5 or 1.6 multiplier effect.

right:

Viewfinder sharing with youngsters interested in birds generates a tremendous amount of good will.

Anhinga, female braking to land, Venice Rookery, South Venice, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/2500 sec. at f/8.

I obviously should have added light to come up with a good exposure here. I can only guess that I was set up to photograph Great Egrets in flight... In any case, lightening the image during conversion yielded a fine image.

both: Burrowing Owl
Cape Coral, FL

left: Canon 600mm f/4L IS lens (on tripod flattened for ground level photography) with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/8.

right: Canon 600mm f/4L IS lens with 2X II TC, 25 mm extension tube, and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/250 sec. at f/11. Fill Flash at -2 stops with Better Beamer.

left: This is my all-time favorite Burrowing Owl image. There was a bird perched on the ground with distracting grasses in front of it. The light was nice so I decided to photograph it in the less than ideal setting. Just as I got on the ground this bird flew in and landed next to the first one and stood tall as he eyed me suspiciously. How lucky can you get?

right: The owls often perch on posts near their nests. With a careful approach and long effective focal lengths it is fairly easy to create some nice head portraits. I love the way this bird is looking down; it looks rather mysterious.

Note: Our SW Florida Site Guide includes directions to several of the most productive Burrowing Owl nests on Cape Coral as well as information on all of my favorite SW Florida hotspots. See the link on the home page for Site Guide details.

both: Great Egret in high breeding plumage, Little Estero Lagoon, Ft. Myers Beach, FL

left: Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Eval. Met. -1/3 stop: 1/2500 sec. at f/5.6.
right: Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Eval. Met. -1/3 stop: 1/1000 sec. at f/11.

left: When a bird presents itself on a flat plane that is roughly parallel to the imaging sensor, I use 45-Point AFPS.

above: We encountered several stunning Great Egrets just after dawn; they were part of a small feeding spree. Being in the right place at the right time is a good plan. On all of the IPTs, I explain my thinking on site selection to the group so that they can apply that knowledge when they are photographing on their own.

both: Great Egret landing in predawn light, Little Estero Lagoon, Ft. Myers Beach, FL

Canon 70-200mm f/4L IS lens with 1.4X II TC (handheld at 220mm) with EOS-1Ds Mark II. ISO 400. Eval. Met. +1 stop: 1/1600 sec. at f/4.

In low contrast situations it is imperative to rely on the central sensor. I added one stop of light here to keep the overall very light-toned image very light-toned. These two images, part of a three frame sequence, were taken in the same 1/100th of a second.

both: Reddish Egret, white form or morph, Little Estero Lagoon, Ft. Myers Beach, FL

left: Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering -1/3 stop: 1/800 sec. at f/11 set manually.
above: Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/1000 sec. at f/5.6.

Reddish Egrets have two color morphs or forms, the dark phase and the white phase (the latter seen here and on the next spread). The dark phase birds are more common in Florida, while the white form predominates in Texas and Louisiana. The forms are genetic; it is possible for two dark phase birds to have a white phase chick and for two white phase birds to have a dark chick.

When you have a good horse, ride it! We first saw this bird on DAY 2 of the IPT, but it did not stick around long. On DAY 3 he flew right at us (above) and stuck around for more than an hour posing in gorgeous light! I encouraged the group to create images with a variety of effective focal lengths, to make both vertical and horizontal compositions, and to vary those compositions. (See spread pages 877-78.)

Homer, Alaska

Bald Eagle IPT

Gallery

Bald Eagle landing on gray ice, Homer, AK

Canon 70-200mm f/4L IS lens with 1.4X II TC (handheld at 225mm) with EOS-1Ds Mark II. ISO 400. Manual Mode: 1/1600 sec. at f/5.

Cloudy day exposures were determined by adding two stops to an exposure reading off the sky and then setting it manally. After making a single image, we would check the histogram and adjust the exposure if needed. Homer IPTs are most likely a thing of the past as the town council passed a ban on eagle feeding in early 2006.

both: Bald Eagle screaming, Homer, AK

facing page: Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering +1 1/3 stops: 1/200 sec. at f/4. Fill Flash at -1 stop with Better Beamer.

above: Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 500. Evaluative Metering +1 1/3 stops: 1/125 sec. at f/4.

On my first trip to Homer in 2005, I came away without any screaming eagle photographs. By carefully noting that a bird that screamed (or yawned) once would likely repeat that behavior every few minutes, I left Homer in 2006 a happy man.

both: Bald Eagle, beginning dive, Homer, AK

both: Canon 70-200mm f/2.8L IS lens (handheld at 125mm) with EOS-1Ds Mark II. ISO 400. Manual Mode: 1/1250 sec. at f/5.6.

These two images were taken about one-tenth of a second apart. With the image above, I desaturated only the blue channel, giving the sky a much grayer look (which I prefer to the light-blue sky in the image on the facing page).

Bald Eagle, Homer, AK

Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Manual Mode: 1/640 sec. at f/4.

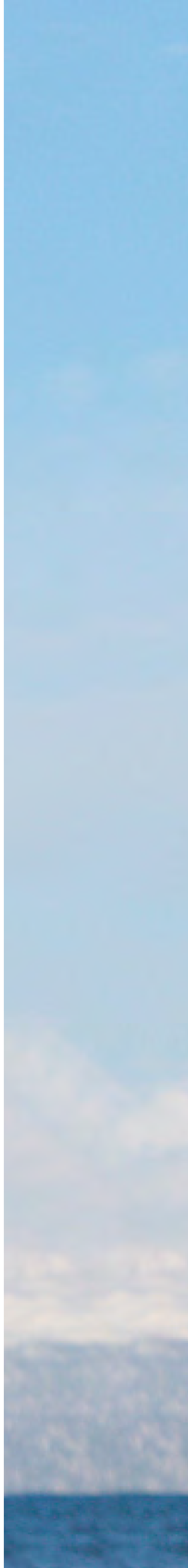
When the wind is blowing towards the sun on a clear day or at you on a cloudy day, the best course of action is to try to create some vertical flight images as the birds turn and bank.

Bald Eagle, Homer, AK

Canon 70-200mm f/2.8L IS lens (handheld at 120mm) with EOS-1Ds Mark II. ISO 250. Manual Mode: 1/1000 sec. at f/6.3.

An image like this requires lots of pre-planning. First, you need to visualize the concept: "eagle in blue sky with snow covered mountains in the background." To create such an image, the choice of a relatively short focal length lens is obvious. Next, make an exposure test image to ensure that you are not over-exposing the mountains. Then, choose a focusing pattern that can achieve sharp focus while placing the bird well off-center; in this case, 45-Point AFPS. Now watch for the perfect eagle in the perfect spot, zoom and frame so as to include a strip of blue water at the bottom of the frame, acquire focus, and depress the shutter button. It's that simple.

I taught the lesson (exactly as above) to the group down at the "Theater Beach" ***before*** *I created the image. <smile>*



Bald Eagle on snow, Homer, AK

Canon 70-200mm f/2.8L IS lens with 1.4X II TC (handheld at 235mm) with EOS-1D Mark IIN. ISO 400. Manual Mode: 1/1250 sec. at f/5.6.

On a magical afternoon near the big boat ramp a fresh snowfall had covered the large parking lot. We were blessed by both the soft light and the many eagles that responded to our offerings of frozen herring.

Bald Eagle, silhouette against hazy sun, Homer, AK

Canon 70-200mm f/2.8L IS lens with EOS-1D Mark IIN. ISO 400. Evaluative Metering -1 1/3 stops: 1/8000 sec. at f/5.

Here, I underexposed for two reasons: to produce the desired silhouette effect, and to reduce over-exposure of the bright sun.

Fort DeSoto IPT

& early spring visits

Gallery

Marbled Godwit in flight, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1D Mark IIN. ISO 400. Evaluative Metering +2/3 stop: 1/500 sec. at f/10 in Tv Mode.
Fill Flash at -1 stop with Better Beamer.

Making a flight image like this requires lots of skill and a little bit of luck. Sometimes you do everything right and do not wind up with the eye sharp. In addition, I was lucky to catch the bird in full downstroke here or I would not have been able to fit the whole subject into the frame....

clockwise from left:

Ruddy Turnstone winter plumage

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/1600 sec. at f/5.6.

Greater Yellowlegs beginning molt to breeding plumage

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 250. Evaluative Metering at zero: 1/800 sec. at f/11.

Willet (Western race) trying to wretch bolus

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 250. Evaluative Metering +1/3 stop: 1/3200 sec. at f/4.

all: North Beach Lagoon Fort DeSoto Park St. Petersburg, FL

When I am on the ground with a big lens and some shorebirds in front of me, I have not a care in the world. I used the Panning Ground Pod to create each of these images.

The Panning Ground Pod. Throughout this book, you have seen dozens and dozens of images made at ground level, and in nearly all of those cases, my lens was supported by a Panning Ground Pod. DeSoto is just about my favorite place to use the ground pod and I never head out to North Beach without having made sure that there is a ground pod in the large rear pouch of my X-tra Hand vest (http://www.vestedinterest.com/).

The ground pod is a virtual necessity for photographing shorebirds at ground level. (The shorebird prints in this photograph are mostly Dunlin prints.) The anodized finish allows me to simply dunk it in saltwater when I am done photographing. When working from your vehicle, the ground pod also does well atop any beanbag (especially the BLUBB). It allows to pan easily with moving subjects.

left: The ground pod keeps your rig out of the sand, even when making vertical images. A peek at the bubble level ensures square to the world images.

above: the 500 IS on the ground pod with the Mark II 1Ds and a 1.4X II TC. I chose to make these product images in the pre-dawn light to avoid excessive contrast.

right: a shorebird's eye view of he 500 IS on a panning ground pod.

To purchase, or to learn more about a Panning Ground Pod, click here:

http://www.birdsasart.com/accs.html#The%20Walt%20Anderson%20Panning%20Ground%20Pod

Laughing Gulls copulating
Fort DeSoto Park
St. Petersburg, FL

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 320. Evaluative Metering at zero: 1/1600 sec. at f/8.

Though I love this one, being on the ground and so close to the birds here hurt me as I would have preferred a wider horizontal here. Not to worry, both John Shaw and Robert O'Toole were behind me making images in horizontal format. We all considered ourselves blessed by the gorgeous light and the fact that there were no other gulls nearby to add clutter to the image.

Laughing Gull
double overhead wingstretch
Fort DeSoto Park
St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 320. Evaluative Metering +2/3 stop: 1/1600 sec. at f/6.3 in Manual Mode.

As I could not fit the whole bird in a vertical frame, I went with the horizontal composition seen here. I wish that I had had the time to move a bit to my left as this would have yielded a better subject to imaging sensor angle. (The gull's body is angled ever-so-slightly away from me.)

Laughing Gull in surf preening breast, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 320. Evaluative Metering -1/3 stop: 1/1000 sec. at f/8.

The gorgeous light, the intimacy, the perfect head angle, and the bubbling surf all make this one work for me.

Laughing Gull preening tail, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +2/3 stop: 1/1600 sec. at f/6.3 set manually.

Here, I had to make the tripod a bit taller to avoid cutting off the bird's feet with the foreground ridge of sand. It is interesting to compare the perspective and the quality of the light in this image with the perspective and the quality of the light in the image on the facing page...

Sandwich Tern, breeding display call, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Eval. Met. +1/3 stop: 1/1000 sec. at f/8. Fill Flash at -1 stop with BB.

Here, I stood at full height behind my tripod to avoid having any of the other birds in the flock appear in the background.

Royal Tern, breeding display call, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/800 sec. at f/10.

I worked while sitting behind my tripod for this one. This allowed for the pleasing distant-Gulf background.

Laughing Gull flock, zoom blur, St. Petersburg, FL

Canon 70-200mm f/2.8L IS zoom lens (handheld) with EOS-1Ds Mark II. ISO 50. Eval. Met. at zero: 1/5 sec. at f/32.

With the sun out, a polarizing filter rotated to the darkest setting allowed me to get down to the slow shutter speed that I needed.

Black Skimmer and Laughing Gull flock before dawn, Fort DeSoto Park, St. Petersburg, FL

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering +1 stop: 1/30 sec. at f/4.

I liked the shape of the flock and worked hard on setting up a pleasing composition. The ship on the horizon was icing on the cake.

Indian Lake Estates

Gallery

I moved to Indian Lake Estates, FL from Deltona, FL two years after my late-wife Elaine's death. ILE is on State Road 60, about 70 miles west of Vero Beach and the Atlantic and 20 miles from Lake Wales which lies at the intersection of SR 60 and SR 27. When I am home (which is rarely) I am 90 minutes from Orlando Airport and exactly two hours from North Beach Lagoon (leaving at 4am and making no pit stops) and the Gulf. There are only about 500 homes on ILE's 4,000 acres and we are surrounded by 17,000 acres of protected land, so you could say that I live in the boonies. Sandhill Cranes are easily photographed at ILE most any day of the year, and several pairs raise young along the shore of Lake Walk-in-Water, which is three minutes from my office/home on Granada Drive. Toss in some Bald Eagles, Osprey, Wild Turkey, Cattle Egrets, Boat-tailed Grackles, lots of landbirds, and oodles of vultures and that will give you a good idea of the birdlife. Bird photography is best in March and April and most clear mornings find me down by the lake doing what I love.

Sandhill Crane family, Indian Lake Estates, FL

Canon 70-200mm f/2.8L IS lens (handheld at 85mm) with EOS-1D Mark IIN. ISO 400. Evaluative Metering +1/3 stop: 1/1000 sec. at f/5.6.

The chicks here are only a few days old. Many of the cranes are acclimated to people. I chuckle now at thinking of how excited I was when I started coming to Florida in the early 1990s and got to photograph a distant Sandhill Crane in a farm field...

facing page: Sandhill Crane sitting on ankles...
Indian Lake Estates, FL

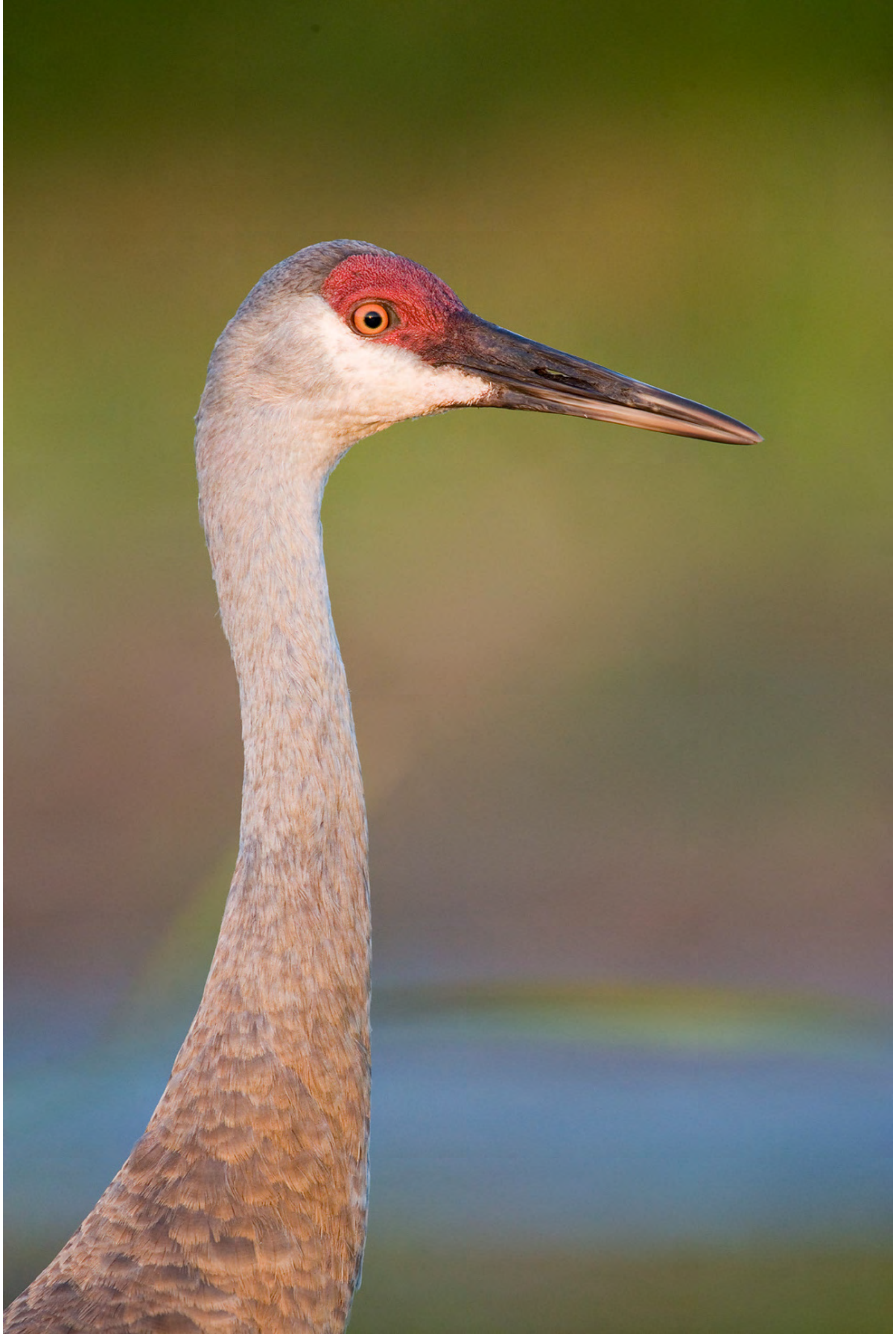
Canon 600mm f/4L IS lens with EOS-1Ds Mark II (on BLUBB from vehicle). ISO 400. Evaluative Metering +1/3 stop: 1/1250 sec. at f/4.5.

I struggled to make this image as some health walkers approached. I love the light and the inclusion of the angled shadow. The bird was resting on a median and I needed to be off sun-angle to avoid having a utility pole in the background. Note that the bird has turned its head back towards the light.

right: Sandhill Crane adult near nest at dusk
Indian Lake Estates, FL

Canon 500mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/125 sec. at f/5.6. Fill Flash at -1 stop with Better Beamer.

It is hard to make images of the adults when those cute chicks are nearby but the soft light and the wondrous background colors here got my attention. 45-Point AFPS works fantastically well with compositions like this as it makes it easy to keep the bird back in the frame.



both: Sandhill Crane
adult on nest after sundown
Indian Lake Estates, FL

facing page: Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Manual Mode: 1/15 sec. at f/8. Manual Flash at 1:4 with Better Beamer. Flash exposure verified by histogram and LCD check.

right: Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Manual Mode: 1/60 sec. at f/11. Manual Flash at 1:4 with Better Beamer. Flash exposure verified by histogram and LCD check.

The image on the facing page was made four minutes after the image on this page. As light levels dropped, I removed the 2X, dropped down to the 1.4X, and moved a bit closer to the nest. When you have a great situation, be sure to vary your compositions. I have grown to prefer using Manual Flash mode to ETTL when using flash as main light after sunset.

Sandhill Crane
chicks on adult's back
Indian Lake Estates, FL

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 800. Manual Mode: 1/30 sec. at f/4. Flash as Main Light at zero with Better Beamer. Flash exposure verified by histogram and LCD check.

I knew that the chicks would be getting ready for bed as the sun went down so I kept checking my flash exposures. Within minutes, I was rewarded with this priceless image. Sorry, no-can-do with film...

Sandhill Crane
curious chicks in nest
Indian Lake Estates, FL

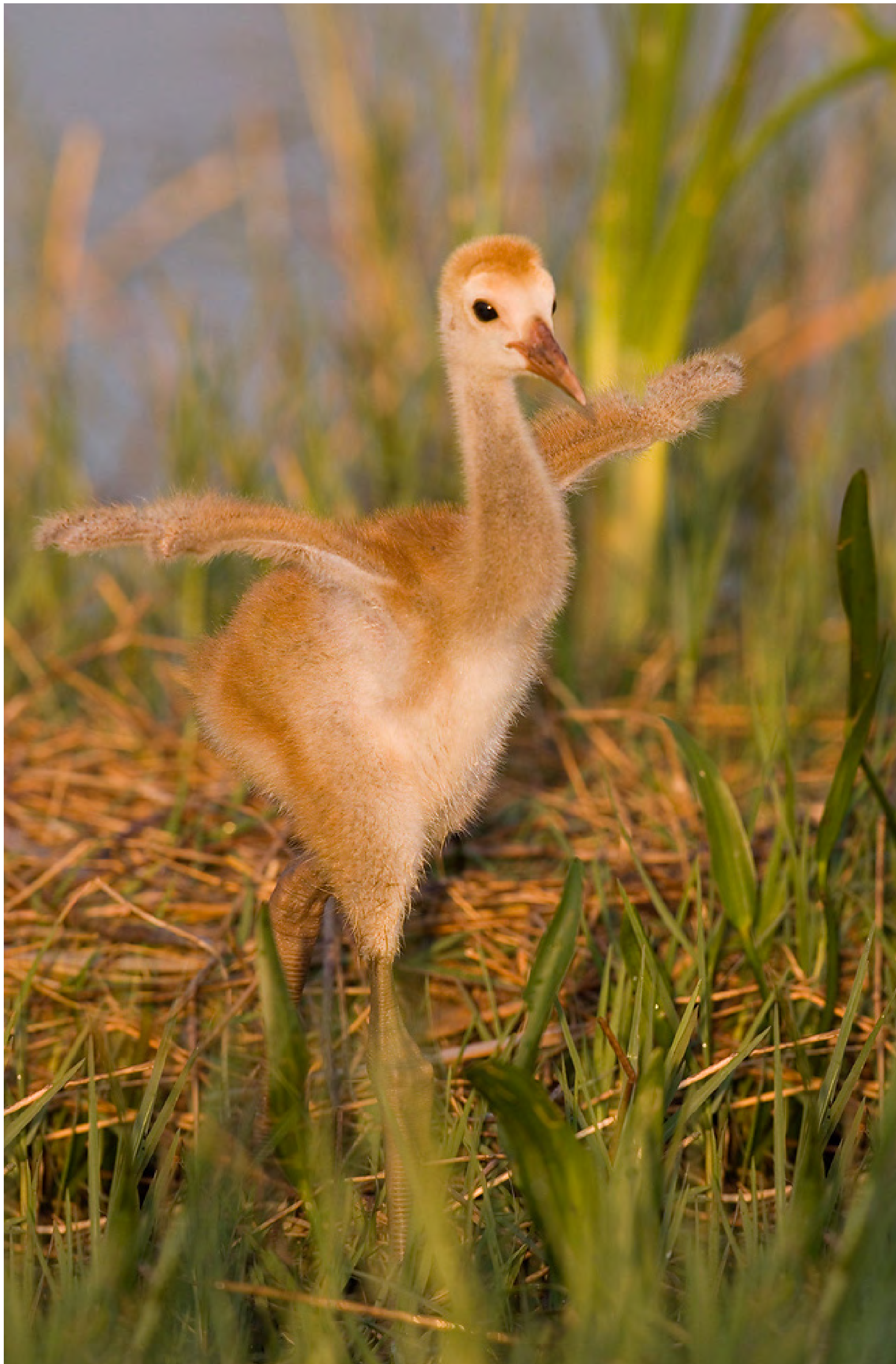
Canon 600mm f/4L IS lens with EOS-1Ds Mark II. ISO 800. Evaluative Metering at zero: 1/100 sec. at f/5.6. Flash at zero with Better Beamer. Exposure verified by histogram check.

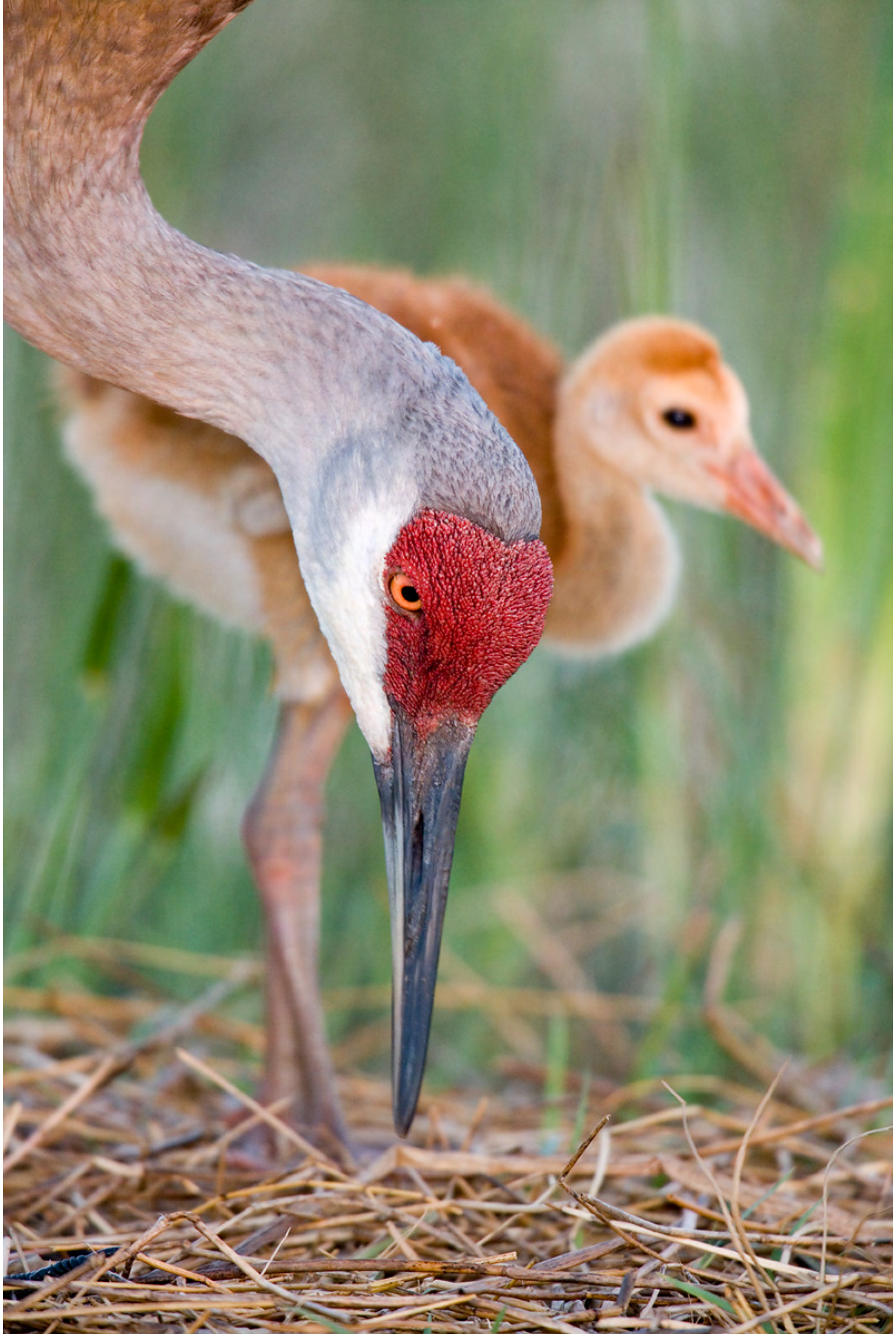
To photograph the nest in the late afternoon I had to walk out into the lake. This did not present too much of a problem until the day that I stepped into a deep hole and fell... You gotta love it!

Getting to photograph the baby cranes each year is a special treat. I hope to get to make images of eggs hatching before they nail the box shut...

all: Sandhill Crane chick at nest in golden light, Indian Lake Estates, FL

all: Canon 600mm f/4L IS lens with EOS-1Ds MII. ISO 400. Evaluative Metering +1/3 stop.
from left to right: raised foot, flapping, watching Osprey, curious.





Sandhill Crane, adult & chick at nest

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Manual Mode: 1/80 sec. at f/5.6. Flash at zero with Better Beamer. Exposure verified by histogram and LCD check.

I was looking for a pleasing juxtaposition of the chick and the adult's head and succeeded...

Sandhill Crane two-week old chick

Canon 600mm f/4L IS lens with 2X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering +1/3 stop: 1/320 sec. at f/8. Flash at zero with Better Beamer.

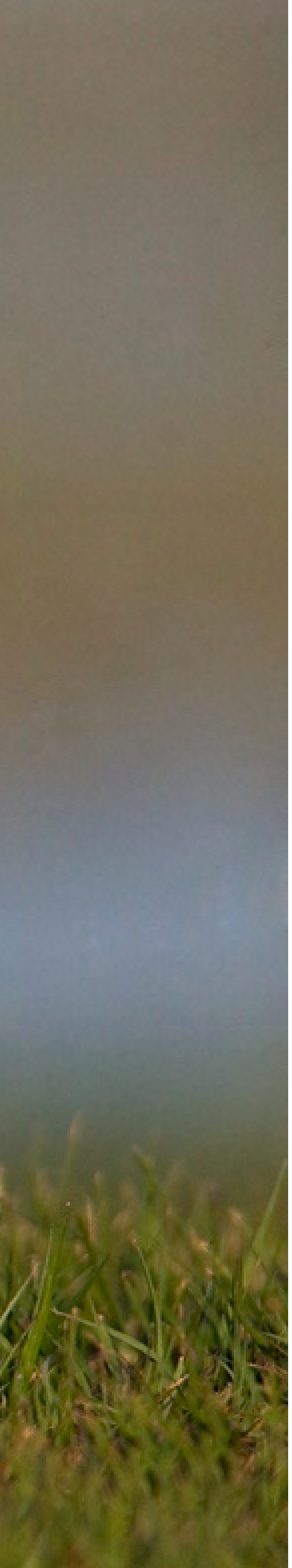
I like to use extra flash to ensure sharp images when working with long effective focal lengths in relatively low light.

Sandhill Crane
three-week old chick biting leaf

Canon 500mm f/4L IS lens with EOS-1Ds Mark II. ISO 400. Evaluative Metering at zero: 1/320 sec. at f/4. Fill Flash at -1 stop with Better Beamer.

With a darker background here I went with the metered exposure. In this low contrast situation autofocus was dropping in and out; I was fortunate to have maintained focus as the curious bird grabbed at the leaf. Note the perfect head angle.

all: Indian Lake Estates, FL



left: Cattle Egret and chironomid midge
Indian Lake Estates, FL

Canon 600mm f/4L IS lens with 1.4X II TC and EOS-1Ds Mark II. ISO 400. Evaluative Metering -1/3 stop: 1/1000 sec. at f/8 in Manual Mode.

Every year in early April there is a huge hatch of midges. The Cattle Egrets and Ring-billed Gulls (among others including the cranes) feast on them.

right: Osprey above nest
Indian Lake Estates, FL

Canon 400mm f/5.6L IS lens (handheld) with EOS-1Ds Mark II. ISO 400. Evaluative Metering +2/3 stop off of meter reading of sky: 1/1250 sec. at f/8 in Manual Mode.

There are several accessible pairs of Osprey at ILE but my favorite is the nest in a pine tree by the boat ramp. The old 400 f/5.6 is still a great flight photography lens...

Living A Dream:
Life as a Freelance Nature Photographer

Many people think that life as a professional nature photographer is a romantic one, and many dream of pursuing that existence themselves. As far as I am concerned, their dreams are justified. Since I walked away from my job as a 23-year veteran elementary school teacher in the New York City school system in 1992, I have been living a dream. I travel North America and the world photographing my favorite subjects, free and wild birds. Being out on a beautiful beach at dawn on a still morning with a big telephoto lens is heaven on earth to me. In recent years, I have made several trips to Alaska to photograph Coastal Brown Bear and to Kenya and Tanzania where I have grown to love photographing all manner of wildlife.

I have the respect of many thousands of folks, including many of my peers. John Shaw and Jim Brandenburg, two of my idols, are my friends. At times I am even recognized in an airport! My work is published regularly in a variety of media around the world. I meet many wonderful folks on my BIRDS AS ART/Instructional Photo-Tours and at weekend seminars and many of them have become close and dear friends. I have taught hundreds of folks to make better images and many of them have gone on to be published nationally. I am invited to speak at various events in the U.S. and more recently have been invited to speak at prestigious photographic conferences in Germany and Finland. In 2005 I keynoted at the NANPA Summit in Charlotte, NC; the standing ovation that I received after my program was one of the great highlights of my life.

Since 1997 I have been a Canon contract photographer, one of the fifty-five original "Explorers of Light." I did seven episodes of the Canon Photo Safari television program and was featured in an ad for the EOS-1n camera body that aired worldwide in several languages. My fifty best friends are photographers. I love being outdoors and I love making great images. Heck, five of my images have been honored in the BBC Wildlife Photographer of the Year Competition, and one of those was recently featured on the cover of "Light on the Earth," a collection of the best images from the last 20 years of this prestigious contest. In recent years I have been invited to lead trips to some of the world's great wildlife destinations, Galapagos and Antarctica. My travel and expenses are paid in full. What's not to like?

I have an efficient, hard-working, well-paid staff of two. They make my life simple and easy. Because of their efforts, I get to spend more than 250 days a year on the road or in the field photographing. I am under no stress at all from my job. Oh, did I forget to mention that I am making more money than I could ever have dreamed of?

Yes, when I am home I put in long hours answering e-mails, writing, working on images, and planning new trips and projects. I often work 14 or more hours a day, but I totally love what I do. When I am teaching I work just as long and even harder. I have lunch and dinner with my groups in an effort to immerse them totally in the photographic experience, editing images at lunch and answering questions virtually non-stop. Evenings are consumed by educational slide programs and critiquing sessions. Many liken my IPTs to photographic boot camps. I do, however, take great pride in sending folks home happy and smarter with lots of great images.

Fact: 99% of the images that I send out for consideration are rejected. That's what is. Accept it. Fact: image sales are down well more than 50% since 9-11. Photographers who used to be able to get by just selling images are having trouble unless they have expanded their business horizons. BIRDS AS ART has flourished by expanding our electronic publishing and mail order line and by doing more seminars, IPTs, and international Photo-Safaris and Cruises.

The bottom line is that I love my job and would not trade it for any other. I am truly blessed.

Thanks and best and love, artie **photo courtesy Rex Hewitt**